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EUROPE'S BUSINESS NEWSPAPER

FINANCIAL TIMES

Austria	Stk22 Indonesia	Rp2100 Oman	Or 1
Bahrain	Dm1222 Iran	Rs2100 Philippines	Pes 40
Bulgaria	DM1.625 Iraq	Rs2100 Portugal	SEK 100
Cyprus	Ct10.6 Italy	L1700 Saudi Arabia	SEK 100
Denmark	DKr10.0 Jordan	PKR2000 Spain	SEK 100
Egypt	EGP2.2 Kuwait	PKR200 Singapore	SFr 10
Finland	FIM1.0 Luxembourg	L1700 Sweden	SwF 10
France	FrF1.25 Luxembourg	L1700 Switzerland	SwF 10
Germany	DM82.5 Malaysia	Rs2100 Turkey	SwF 10
Greece	DrY25 Morocco	DKR2000 UAE	SwF 10
Hong Kong	Hk\$1.25 Netherlands	Rs2100 UAE	SwF 10
Iceland	Ikr125 Norway	Rs2100 UAE	SwF 10
India	Rs15 Norway	Rs2100 UAE	SwF 10

No.30,898

Wednesday July 19 1989

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World News

Jaruzelski decides to stand for presidency

An end to the immediate Polish political crisis appeared in sight as General Wojciech Jaruzelski, the Communist Party leader, announced he would, after all, stand today for election to the post of President.

And those activists within Solidarity who have pushed for their movement to form the next Government have acknowledged they are in a minority. Page 20

Rebuff for US offer
Dial lawyers said they were advising families of those killed when the USS Vincennes shot down a civilian aircraft to refuse six-figure payments from the US Government and seek up to 15 times as much in American courts.

Students under fire
El Salvador's armed forces tightened their grip on the national university after at least nine students were wounded when soldiers opened fire during a protest.

Mandela not hopeful
Nelson Mandela, the jailed African National Congress leader, does not expect to be released this year. Page 4

Tokyo support falls
The popularity of Japan's ruling Liberal Democratic Party has slumped to a new low only days before a crucial national election. Page 4

Progress on ban
The US and the Soviet Union have made substantial progress on a draft treaty banning chemical weapons, but problems remain over verification. Page 6

Fresh Natal violence
An unnamed black woman, who was pulled off a bus, shot and then doused with petrol and burnt to death, was one of 24 black victims of violence in Natal. Page 4

Row over rail pay
The UK Government rounded on the country's main rail union for voting to go ahead with its fifth 24-hour strike after rejecting an improved pay offer. Page 20

Bush boosts Labour
US President George Bush met Dutch political opposition leader Mr Wim Kok, in a gesture that is seen as enhancing the credibility of the Labour Party. Page 2

SA peace move
Regional peace moves in Southern Africa take another step forward today when Mr FW de Klerk, leader of South Africa's ruling National Party, flies to Maputo for talks with President Joaquim Chissano. Page 4

Dissident arrested
China said police in Shanghai arrested Yang Wei, a prominent US-educated dissident who was released from prison last January.

Typhoon hits HK
Hong Kong's streets were virtually deserted at the start of the normal rush hour after Typhoon Gordon swept into the southern coast of China, injuring 29 people.

Iran executions
Iran hanged 13 drug dealers labeling them "merchants of death" and bringing this year's total to 700. Page 23

MARKETS

STERLING
New York lunchtime: \$1.6255

London: \$1.6255 (1.6145)

DMS 0.3 (0.0775)

FFr10.445 (10.4375)

SF2.67 (2.66)

Y230.22 (228.5)

£ Index 92.3 (92.2)

GOLD

New York Comex Aug 373.2 (372.2)

London: £371.25 (same)

N SEAS OR (Argus)

Brent 15-day Avg. 18.025 (18.05)

Chief price changes yesterday: Page 21

Business Summary

Brussels company law may face EC block

Controversial plans for a European company statute, which would allow cross-border mergers to incorporate EC companies, met a potential blocking minority in the EC government in the first formal ministerial response to the scheme. West Germany, Britain and the Netherlands gave varying sceptical receptions to the plan. Page 20

THE DOLLAR fell sharply against the D-Mark after disappointing US trade figures. The US unit had moved firmer during the morning and broke through resistance levels at

Dollar
against the D-Mark (DM per \$)
1.92
1.88
1.84
1.80
1.76
1.72
1.68
1.64
1.60
1.56
1.52
1.48
1.44
1.40
1.36
1.32
1.28
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DM1.9170 and DM1.9200. The dollar's decline against the yen was less pronounced as traders remain wary ahead of Sunday's elections. Currents, Page 38

IBM Boosted by higher worldwide demand across its wide product range, the computer industry leader turned in sharply higher earnings for the second quarter recovering to net profits of \$1.34m, or \$2.61 a share. Page 21

THE Philadelphia Stock Exchange disclosed that it was in exploratory talks with the American Stock Exchange and two other major US exchanges with a view to a possible merger. Page 21

REGULATIONS proposed by the US Treasury are likely to force foreign businesses for the first time to seek US government approval for American mergers and takeovers before deals are concluded. Page 3

PRU-RACHE Securities agreed to buy the branch network of Thomson McKinnon Securities, a move which will make it the fourth largest US retail brokerage firm. Page 24

ROTESCHILD Group, banking and investment concern, marked the launch of its new Italian subsidiary, Rothschild Italia, by announcing a £112.5m (£61m) fund for financing management buy-outs and investments. Page 25

RATES of growth of new car sales in West Europe started again in June with an estimated jump of 5.1 per cent to around 1.17m. Page 2

GERECS' new Government has asked Denison Mines for an extension of 30 days to give it time to consider making an offer for the Canadian company controlling stake in the North Aegean Petroleum Company. Page 22

COMMERCIAL foreign borrowing planned for this year by the Industrial Development Bank of India will total Rs1.3bn (\$75.7m). Page 26

CARIBBEAN Members of the Caribbean Economic Community (Caricom) have agreed to establish a regional capital market. Page 25

WEYERHAEUSER, US forest products group, reported a modest advance in second-quarter earnings. Page 24

GOLD: Results from Randfontein and Western Areas, the two operating gold mines managed by the JCI group, highlighted difficulties faced by South Africa's gold miners. Page 23

CONTENTS

Business Summary

GEC and Agnelli join Goldsmith in battle for BAT

By Nick Bunker in London

GEC, the UK electronics group, and Italy's Agnelli family last night entered the £1bn (£1.2bn) bid battle for the BAT Industries of Britain by throwing their weight behind the assault on the tobacco-based multinational by Sir James Goldsmith's Hoylake group.

Their participation, which is likely to electrify stock markets this morning, means that two of Europe's leading industrialists, Mr Gianni Agnelli and GEC's Lord Weinstein, have lent their authority to the attempt to take control of BAT and break it up by disposing of

its retailing, paper and insurance interests.

The line-up of forces ranged against BAT, announced last night after the London Stock Exchange's early close because of the country's one-day national rail strike, now comprises GEC, Banque Paribas, the Swiss-based Pargesa group, the Rothschild et Cie banking empire and the Agnelli family's IFI international holding company.

Mr Patrick Sheehey, chairman of BAT, said last night:

"We thought that GEC had better things to do. We assume

that this means that Lord Weinstein would not resist a highly leveraged bid for GEC."

IFI and Paribas would join the battle for BAT on Sir James's side because of the country's one-day national rail strike, now comprises GEC, Banque Paribas, the Swiss-based Pargesa group, the Rothschild et Cie banking empire and the Agnelli family's IFI international holding company.

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that this means that Lord Weinstein would not resist a highly leveraged bid for GEC."

Rumours that Pargesa, GEC, IFI and Paribas would join the battle for BAT on Sir James's side began circulating over the weekend, but with Lord Weinstein declining to comment on Sunday the City of London had been sceptical about his involvement.

In another sign of the huge stakes now involved in the battle for BAT, the largest-ever takeover in the UK, it has emerged that Sir James's merchant bank, Hambros, will

receive a £30m payment from Hoylake if it succeeds in the bid.

As one of the first indications of the scale of the rewards intermediaries expect to make, merchant bank Hambros will receive £5m even if the bid fails.

Neither figure has been made public by Hambros or the

Bermuda-based Hoylake in the UK. However, both are contained in hundreds of pages of submissions to regulatory authorities and takeovers.

The filings also reveal that the French-based Paribas

group has provided £85m of loan finance to aid Hoylake.

Paribas's announcement two days ago that it was holding advanced discussions about becoming an equity investor in Hoylake saddened BAT, because it obtained a listing for BAT on the Paris stock exchange in 1985.

The US regulatory filings

also show that banking subsidiaries of Paribas in Luxembourg and the Bahamas helped fund about half of Hoylake's purchases of BAT shares before the announcement of the bid on July 11.

Nairobi turns heat on ivory trade

By Julian Ozanne in Nairobi

IN THE HEAT of the midday African sun President Daniel Arap Moi of Kenya strode across the rolling grasslands of the Nairobi National Park to a spot where 2,000 elephant tusks, worth £2m, were piled into a pyramid.

A military brass band struck up the national anthem as the President marched down a red carpet from the long file of Mercedes-Benz and Peugeots. Policemen in khaki uniforms and pith helmets, carrying swagger sticks, stood to attention.

After a short speech attacking the illegal ivory trade the President grabbed a long, flaming torch and set the 12-ton ivory stack alight.

A mood of euphoria and excitement spread across the assembled Cabinet ministers and elephant experts as the first task caught fire. Wildlife enthusiasts with badges declaring "Only elephants should be allowed to wear ivory" cheered and posed before the fire for cameras.

This orchestrated publicity gesture, held before the international press, was the latest move by the Kenyan Government in support of a worldwide ban on the trade in ivory in an effort to halt the crippling, illegal poaching of elephants.

The spectacle was co-ordinated to accommodate a live television transmission for Good Morning America, the US breakfast-time show. South African-based foreign correspondents, usually banned from entering Kenya, were given special exemption to

Continued on Page 20

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and cocoa - a graphic illustration of exactly the shortages which have sparked off the industrial unrest.

In Prokopyevsk, the main mining town in the Siberian field, some 90 per cent of all industrial workers were also reported to be out in sympathy.

The strike, by far the most serious unrest since Mr Gorbachev came to power and the most serious to be reported since the 1920s, has galvanised the Soviet authorities.

Mr Slyunakov, who is responsible for the economy and social affairs, admitted that his first hours in the region had "convinced us that the region has many problems."

"People have lost patience and composure," he said. "We understand you. We shall not limit ourselves to half-measures."

The concessions appear to meet almost all the miners' concrete demands. However, many mass meetings have gone further to demand political measures in Moscow, including an emergency session of the new Congress of People's Deputies to consider the state of the mining industry, and to debate constitutional reforms.

The government concessions are certain to be expensive, especially the doubling in the pithead price for coal, when the state budget is already running a deficit of about 20 per cent of spending.

There was no indication whether the increased price would be passed to consumers

Continued on Page 20

Strike threatens power stations, Page 2; Editorial comment, Page 18

A Soviet coalminer shouts at a speaker during a strike rally in Prokopyevsk. The strike has spread from Siberia to the Ukraine

GEC, Plessey join forces to apply for UK telecoms licence

By Hugo Dixon in London

THE GENERAL Electric Company and Plessey, the two British electronics concerns which have been locked in a takeover battle for nine months, yesterday announced that they were making a joint application for one of the UK's few personal communications licences.

The new licences, due to be awarded later this year, are intended to compete with the country's existing mobile and fixed telecommunications networks, and are expected by many to become a large source of profits early next century.

The decision to join forces was "totally inapplicable," Mr Meade added, pointing to the benefits of pooling the companies' technological expertise with the operational experience of BellSouth. Both sides dismissed speculation that the reason for joining forces was that two rival applications would have not been considered seriously in view of the takeover battle.

Mr Michael Armitage, an analyst at Morgan Stanley, said: "GEC and Plessey separately probably would have had no chance of winning a licence. Now, however, they have to be regarded as the front-runners."

The decision to come

together follows a period of considerable bitterness in the relationship between the two companies, with Plessey having accused GEC of bad faith, after peace-talks collapsed only two weeks ago.

There had been contact between the two companies over the past month in an attempt to set up a link, but, according to Mr Parker, it was only after a telephone conversation last Wednesday between Lord Weinstein and Mr Stephen Waller - respectively, GEC's and Plessey's managing directors - that "whatever blockage there might have been in the eye of the beholder was removed."

Plessey and GEC will each have 30 per cent of the consortium, while BellSouth will have 20 per cent. A further 20 per cent is being kept on the side for additional partners.

None of the three partners would spell out how they would construct a network if they were awarded a licence. Lex, Page 20

The first year performance of the Guinness Flight 1992 Fund has demonstrated the returns available from investment in those companies that will be gainers in the 1992

With the process continuing, we believe that picking the winners can yield further good returns as industry restructures.

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EUROPEAN NEWS

W German trade with Communist countries soars

By Andrew Fisher in Frankfurt

WEST GERMANY'S trade with Communist countries has risen sharply this year as they seek to modernise their industry, but is still being held back by the precarious economic situation in some parts of the East bloc, the Bundesbank said in its latest monthly report.

The central bank cited the high indebtedness of some countries, their limited industrial competitiveness, and foreign currency shortages resulting from lower export prices (chiefly of oil and gas) as inhibiting factors in their trade with West Germany.

"Most Communist countries had to watch out that their current account deficits with West Germany did not widen too much, because they had either reached their credit limits or were trying hard - like Romania - to reduce their borrowing in Western currencies."

In the past three years, West Germany's current account deficits with Communist trading partners have ranged between DM5.7bn (£1.2bn) and DM5.6bn (£1.8bn), which the bank said was fairly stable.

Altogether, the Soviet Union does 10 per cent of its foreign trade with West Germany, or 20 per cent if only its dealings with the West are considered.

The proportion is roughly the same for the rest of Eastern Europe. Other Western countries like France, the UK and Italy lag way behind in Communist trade. But West

Germany ranks behind Japan and the US in its trade with China. To put the matter in perspective, however, West German business with either Austria or Switzerland is more than that with all Communist countries together.

In the first five months, exports to the Communist world rose by an average monthly 18 per cent (10 per cent when adjusted for price rises) over the average for the whole of 1988, continuing last year's more modest rise after the declines in 1986 and 1987. A third of the business was in machinery, reflecting Communist efforts to revamp their economies.

Over the same period, imports climbed by 18 per cent. In the previous three years, they fell by 22 per cent in value, but gained by nearly 30 per cent in volume, the difference mainly reflecting the collapse in energy prices, now been reversed. Two-thirds of Soviet sales to West Germany are of oil and gas.

The Bundesbank said a third of the East bloc's accumulated current account deficit of some DM18bn with West Germany in the past four years had been financed by DM6bn of capital exports and, to a much lesser degree, trade credits.

At the end of last year, West German net assets in the Communist area were DM30bn, or 8 per cent of its total foreign net assets of DM350bn.

SPD would raise energy taxes by almost third

By David Goodhart in Bonn

WEST GERMANS will have to pay 30 per cent higher energy taxes if the Social Democratic Party (SPD) wins power at the end of next year.

An ecology-conscious tax reform is one of the central planks of a government programme drafted by the working group "Progress '90" which has been leaked to the press.

The programme repeats the SPD's promise to close down the nuclear industry (which now produces about 40 per cent of the country's electricity) but admits that this may only be possible "in the medium-term". It also proposes reducing the speed limit for cars to 120kmph, and measures to make it easier for women to combine having children and pursuing careers such as a job-return guarantee lasting three years.

Other drafts of the programme have toyed with lower nominal corporate tax rates paid for by abolishing certain tax advantages. However, this is being re-thought after complaints that it clashed with the

goal of increasing investment. The radical overhaul of energy taxes was greeted by leading members of the Green Party but rejected as being against consumers' interests by government spokesmen.

The leak of the document comes at a difficult time for the SPD which has been experiencing its own troubles after nearly a year of rising popularity. It polled only 37.3 per cent in the recent European elections when it had expected more than 40 per cent, and last week an internal strategy paper argued that the party would gain from the rise of the far-right Republicans was leaked, showing the usually moralistic SPD in an unattractive cynical light.

The party's recent difficulties make it more likely that Mr Oskar Lafontaine, the controversial deputy leader and Prime Minister of the Saarland, will lead the SPD into the next election, rather than Mr Hans-Jochen Vogel, the current leader.

Bush gives Dutch Labour party leader a boost

By Laura Raun in The Hague

PRESIDENT George Bush yesterday met the most influential leader of the Dutch political opposition, Mr Wim Kok, in a gesture that is seen as enhancing the credibility of his Labour Party.

He and Mr Kok, Labour's parliamentary whip, spent about 40 minutes discussing East-West relations, European disarmament and environmental protection, before he flew back to Washington at the end of his 10-day European tour.

The Dutch politician, who aspires to be Prime Minister, urged Mr Bush to hold a summit soon with President Mikhail Gorbachev in response to

the Soviet leader's letter to Group of Seven leaders proposing talks on economic co-operation between East and West.

Mr Kok, whose party has been in opposition for most of the past 12 years, wants to cut defence spending and supports early talks on short-range nuclear weapons.

A general election will be held on September 6 following the collapse of Mr Ruud Lubbers' Christian Democrat-Liberal Government last May.

According to an opinion poll last week the Socialists would become the biggest party in Parliament if elections were held now.

Autumn clouds loom over sun-kissed Turkish premier

Prime Minister Turgut Ozal's optimism is not borne out by the figures, reports Jim Bodgeman

A WAVE of excitement rippled through the Turkish press on Monday at the end of a larmorous Bayram holiday when Mr Turgut Ozal, the Prime Minister, invited senior journalists down to the Mediterranean resort of Side.

As a government gathering against a backdrop of ruined Greek temples and theatres swarming with holiday-makers, there was one overwhelming question on their mind: would the beaming, tubby premier set a date for early general elections, or wouldn't he?

As it turned out, Mr Ozal simply reiterated that in view of the parliamentary majority enjoyed by his Motherland Party (Anap), there was no need to get the country again until his second term of office expired in 1992. His main purpose was to deny reports that the tourism industry was in trouble, pointing out that all the hotels visited during his brief trip to the coast had good occupancy rates.

But even this was not as good a sign as it appeared - Turks were simply flocking to take advantage of the cut prices offered by hoteliers hit by a slump in tourism.



Ozal: holiday news conference

And however brave a face Mr Ozal might put on it, the government faces a stormy autumn, as parliament prepares to vote on a successor to President Kenan Evren, who steps down in November.

June opinion polls showed that Anap's popularity with an electorate disenchanted with high inflation had fallen as low as 16 per cent from its disastrous 22 per cent score in the March local elections.

In spite of a package of economic measures introduced along with a major cabinet reshuffle after the March poll, inflation was running last month at an annual 68 per cent, having hovered at 62 per cent for the previous two months.

On the inflation front, there may well be worse to come. In what appeared to be thinly veiled electoral hand-outs, generous salary increases effectively averaging around 95 per cent were announced for civil servants immediately prior to the Bayram holiday.

Blue-collar workers in the public sector had already been compensated for high inflation in May last year through settlements with trades union confederations.

However, the government has increased support prices for farmers, and recently pledged extensive relief for hard-pressed farmers on their debts to the state-owned Ziraat Bankasi (Agricultural Bank).

Mr Ekrem Pakdemirli, the finance minister, has played down the danger of a surge in the money supply. However, this may prove difficult

to meet the salary increases alone, fresh money was issued to the tune of TL15 trillion (million million, £433bn), while M1 money supply reached a record high of TL8 trillion last week.

The handouts are expected to feed through fully into the economy by mid-autumn, when it seems possible inflation may nudge three digit figures again for the first time since the early 1980s. That would be an embarrassing failure given that official targets call for a rate of 60 to 70 per cent by the end of the year.

So in spite of Mr Ozal's seaside denial, and polls suggesting that an early ballot would be political suicide, speculation persists that the prime minister will call early elections before the economy deteriorates further.

There may be little other option to salvage what is left of his fondly-described "central pillar" of middle-class support for Anap before it erodes away altogether.

A strident campaign alleging that

the government lacks a popular mandate has been kept up relentlessly since March by Mr Ozal's arch-rival on the right, former pre-

mier Mr Suleyman Demirel, leader of the third largest parliamentary grouping, the True Path Party (DYP).

Mr Demirel and the DYP have concentrated on the cities, building on strongholds in the countryside. His attempts to improve his image in the business community, which associates him with the chaotic late 1970s when he was prime minister, are enjoying some success.

In the private sector, sluggish business activity bears out warnings of incipient "stagflation". Banks have been forced to move deposit rates upwards to keep pace with inflation, even though they are weighed down by liquidity in the wake of the liberalisation of interest rates last autumn.

However, corporations are a bad risk and the saturated inter-bank market affords little relief.

The centre-left Social Democratic Populist party (SHP) has been low-key in its campaigning in comparison with Mr Demirel. Its internal politics have been complicated by differences between the party executive controlled by its moderate, pragmatic secretary-general, Mr Deniz

Baykal, and left-wing deputies.

Many of the latter come from the east, where grievances have been fuelled by the government's continuing refusal to recognise the existence of a Kurdish minority.

Factional rebellions, particularly from the important Islamic fundamentalist wing, have sapped Anap as well, and an early election call might arouse a back-bench rebellion by Anap MPs anxious to hold on to their seats.

Weakened political leadership has damaged the co-ordination between the central bank, treasury and State Planning Organisation, say disaffected officials.

The premier is as enigmatic as ever about his own designs on the presidency, keeping his option open. On the other hand, he may still reach some kind of accommodation with the main opposition Social Democratic Populist Party (SHP) on a consensus candidate, thereby excluding the DYP.

Other scenarios include buying off Mr Demirel with the presidency. The easy way out in the short term simply could be to extend President Evren's term.

Soviet coal strike threatens to halt power stations

By Quentin Peel in Moscow

THE IMPORTANCE of coal as an energy source for the Soviet economy has steadily declined in recent years, falling behind gas as well as oil in the 1980s.

According to the latest official statistics, coal accounted for just over 20 per cent of energy requirements in 1987, as against 37.7 per cent for gas and 40 per cent for oil.

However it still accounts for a large share of the fuel supplies to electricity power stations, the iron and steel industry, chemical sector, as well as agriculture and industrial and

district heating schemes.

No reliable statistics on the effect of the strike have been published, although Mr Nikolai Ryzhkov, the Soviet Prime Minister, warned the Supreme Soviet on Monday that several power stations and metallurgical plants would soon be forced to stop because of the dispute.

Telegrams pleading for supplies from plants in the Urals, the Kuznetsk coal field in southern Siberia, where the coal strike is centred, is the second largest in the country and principal supplier to the heavy industries of the Urals and Volga region.

The Donets basin in the Ukraine, the oldest and largest coalfield, which began to come out in support of the Siberian miners last Saturday, is confined to supplying industry worth hundreds of millions of rubles.

In 1985, the Donets produced 197m tonnes of coal, the Kuzbas 141m tonnes, and the next largest were Ekibastuz (80m tonnes) and Karaganda (50m tonnes) in Kazakhstan.

The Soviet miners can hardly be accused of striking mainly for more pay, because

they are already among the highest-paid workers in the Soviet economy. Two years ago the average miner's monthly wage was Rs450, more than double the national average of Rs210, while skilled miners were earning Rs600. Those working in the far north, or in the most remote Siberian pits, can earn Rs1,000 or more.

Moreover, those in unfavourable conditions already have a 30-hour week - although a major complaint of the strikers is that their working hours do not include travelling time to

and from the coal face.

They also get notably better annual holiday, and access to holiday homes, tourist camps and sanatoria than other industrial workers.

The greatest problem seems to be that their living conditions are so bad that they cannot spend their higher wages, and they are convinced that greater devolution of power from the central bureaucracy will enable individual mines to invest more in their workers' daily lives and comfort.

Jaruzelski throws hat in the ring

By Christopher Bobin in Warsaw

THE POLISH Communist Party leader General Wojciech Jaruzelski, told his parliamentary Deputies yesterday that "new circumstances" had changed his mind about standing for President.

This would include support for his candidacy from both President Mikhail Gorbachev and President George Bush and from the military establishment which has clearly favoured him.

General Czeslaw Kiszczak, the Interior Minister, whose candidacy had been suggested by Gen Jaruzelski, is expected to urge Deputies to vote for the party leader.

The President will be elected by the National Assembly - that is the 460 Sejm (Parliament) Deputies and 99 Senators voting together - and the general, who was 66 this month, needs the votes of 50 per cent plus one of those present and voting to win a six-year term.

Despite the Solidarity's movement's successes in national elections last month, the official parties still have a majority of up to 40 in the Assembly and there are unlikely to be enough dissenters from the established parties in today's vote to block Gen Jaruzelski's election.

Solidarity Deputies, though, look set to vote against or abstain en masse and there is little chance that the general will again overhaul the Italian group in the second half of the year to retain market leadership for the fifth year.

The two main losers in the first half were Mercedes-Benz and Rover, in which Honda is planning to take a 20 per cent equity stake.

Rover sales fell 5.4 per cent across Europe, and Mercedes by 4 per cent. The latter has also been hit by a sharp drop in US sales. In West Germany its sales plunged 11.3 per cent thanks in part to a big drop in diesel car sales.

It has been outperformed by BMW, its chief domestic rival in the world luxury car market, which increased its European sales by 18 per cent to 213,000, the biggest jump on volume achieved by any European carmaker in the first half.

The reformists, therefore, will be looking to Gen Jaruzelski to retain his post as party leader at least until a party congress early next year in order to protect them against attacks from the rank-and-file and central committee.

One of Gen Jaruzelski's first tasks as President will be to choose a candidate for Prime Minister. The latter will then attempt to form a government, which will be faced immediately with the acute problem of raising food price rises at the risk of widespread unrest.

Professor Wladyslaw Baka, party secretary responsible for the economy, is viewed by Solidarity's establishment as a possible candidate and he is thought to favour spreading the rises over a period.

Mr Mieczyslaw Rakowski, the present Prime Minister, is also still in the race, but he too, is now opposed to immediate rises despite pressure from his own ministers appealed by a mounting budget deficit.

For the moment, Solidarity, despite urging from some of its leaders like Mr Adam Michnik and Mr Jacek Kuron, is ready to support the formation of a Communist-led Government which would be closely monitored by the opposition in Parliament.

Solidarity's parliamentary group is also to debate soon a policy paper prepared by Mr Kuron arguing that the only way to achieve "peaceful change" is for the union to "co-operate with the reformist wing of the Communist party." This could mean forming a Solidarity-led Government now which would work closely with the President and would be supported by the Communist party leadership.

Published by the Financial Times (Europe) Ltd, Frankfurt Branch, reprinted by E. Hugo, Frankfurt/Main, and distributed by Board of Directors, F. Sarlow, R. F. Miller, G.T.S. Daner, A.C. Miller, D.E.P. Parker, London; P. Miller, Frankfurt/Sachsen-Anhalt, Frankfurt/Main; Responsible editor, Sir Guy Owen, Financial Times Number One Southwark Bridge, London SE1 9HL. © The Financial Times Ltd, 1989.

FINANCIAL TIMES
1989, 1990 and 1991 daily except Sundays and holidays. UK postage 365p per annum. Second class postage and air freighted offices. POSTMASTER: Times, 14 East 60th Street, New York, NY 10022.
Financial Times (Scandinavia) Ltd, Cistergate 44, DK-1000 Copenhagen K, Denmark. Telephone (01) 33 41 5933.

WORLD TRADE NEWS

Problems of tariff cuts still unsolved

By William Duffforce in Geneva

A FUNDAMENTAL difficulty in achieving trade tariff cuts in the Uruguay Round talks remained unresolved yesterday after the US persisted in a different approach to that of the European Community and Japan.

Brussels and Tokyo presented to the group negotiating on tariffs, formulae which would result in co-ordinated reductions in customs duties for all industrial products.

The US said it was submitting to 14 of its trading partners, including the EC and Japan, requests for tariff cuts on given products, including some agricultural and natural resource-based items.

US insistence on negotiating tariff cuts individually on a request-and-offer basis is dictated by its desire to protect emerging domestic industries, such as textiles. Almost all other countries favour a formula approach. The US attitude will at the least complicate tariff reductions.

The EC and Japan proposed different formulae, but both aimed to meet the target of a 33 per cent average tariff cut set by trade ministers at their mid-term review of the Round in December.

Some Third World negotiators voiced reservations about the EC's categorisation. It called for industrialised and more advanced developing countries to reduce tariffs with a base (starting rate) of 40 per cent or higher to a ceiling of 20 per cent. For rates of less than 40 per cent a formula would be applied that would cut a 20 per cent rate to 12 per cent.

Least advanced countries would contribute "within the limits of their capabilities", while the other developing countries would be expected to cut all rates of more than 35 per cent to 35 per cent and would be offered the possibility of cutting duties of 35 per cent or less in bilateral negotiations.

The EC stipulated that all cuts in duties should be "bound", meaning that governments would undertake not to raise them again. Some developing countries objected.

Japan, HK want Gatt dumping code revised

By William Duffforce in Geneva

JAPAN AND Hong Kong, stung by EC duties on rapidly growing consumer and high-tech electronic exports, are urging revision of Gatt's anti-dumping code.

Toyo has proposed a list of changes to the Uruguay Round group discussing Gatt code improvements. The most important would tighten the procedure governments impose on anti-dumping duties must follow in calculating the difference between the price of the allegedly dumped product and its "normal value" or domestic price.

Last week, when the EC announced provisional duties of 6.4-8.9 per cent on imports of compact disc players from 15 Japanese and S. Korean manufacturers, Sony claimed the calculations were wrong. Brussels has been accused of "imaginative licence" in assessing alleged dumping margins on imported products.

The Gatt code states the dumping margin is to be determined "by comparison with the cost of production in the country of origin plus a reasonable amount for administrative handling and any other costs and for profits". But Japan wants this changed to specify that the value should be the sum of costs of production, selling

costs, general and administrative expenses and any other costs of the exported product; and, profit normally realised on sales of products of the same general category in the domestic market of the country of origin.

Japan also aims to reduce scope for trade "harassment" through EC procedures which, they say, do not permit an effective counter-case.

Hong Kong, which has undergone eight EC anti-dumping actions in the past 18 months, urged substantial changes in the Gatt code, to stop governments acting against normal price competition.

It argued that anti-dumping provisions, originally introduced under domestic competition or anti-trust law, have become protectionist systems for curbing import competition. Implementation in the existing code allowed authorities calculating dumping margins to reach figures higher than actual costs, for example, by fixing arbitrary profits.

The EC and US have sought different changes to the Gatt code - to include provisions to stop exports circumventing anti-dumping rules through "screwdriver" assembly plants in importing countries.

Soviet travellers light on consumer heaven

Poles turn border crossing into a 'special' trade centre, writes Judy Dempsey

AS EAST European and Soviet economists ponder the convertibility of their currencies, a novel experiment in trade is taking place in the north-eastern Hungarian town of Zahony, which demonstrates the market value of these currencies.

For years, this small Hungarian-Soviet border crossing was eyed enviously by Soviet citizens, particularly the 200,000-strong Hungarian minority who live in Uzhgorod, a region just across from the Hungarian border.

They had heard about the luxuries in Budapest. But they had also heard how their Hungarian cousins flocked to Vienna to stock up with every imaginable consumer item.

But while Vienna may well epitomise the Western capitalist world for the Hungarians, it is nothing compared to Zahony, which is fast becoming a consumer's haven for Soviet travellers, thanks to new travel regulations recently introduced by the Soviet authorities.

And, most important of all, thanks to the ingenuity of the Poles who have transformed the place into a mini-"trade emporium".

Activity intensified last March, when the border crossing at Zahony was almost completely opened up. Soviet citizens living in the 30-km border zone, can now cross as many times as they like into Hungary.

They require no exit visa, no



visa from the Hungarian authorities, no invitation, just a valid passport which, however, cannot be used for any Western country.

Soviet citizens have jumped at the opportunity to travel. In the first three months, 1.5m crossed into Hungary.

So great was the traffic that the Hungarian and Soviet authorities opened up three new border crossings south of Zahony.

"Yesterday, we had 30,000 come through, and that's just one-way traffic from the Soviet Union," said a tired Hungarian border guard. "You should have been here two months ago. Sometimes, we get getting 30,000 a day."

But there is a catch to these new liberal travel regulations.

Any Soviet citizen travelling across to Hungary can only buy from the authorities 800 worth of forints. That amounts to 570 forints about £2.

That is hardly enough for consumer-hungry Soviet citizens who want to buy up the goods in Zahony, then travel down to Debrecen, the main city in eastern Hungary.

Not that there is much to buy, officially that is, in this shambolic settlement.

Official exchange and tourist offices are difficult to find, if not nonexistent.

The same applies to the dearth of department stores and other consumer shops. A Western visitor would find few reasons to linger in this corner

Like hundreds of other

Poles, he was selling them out of the boot of his Lada in a field which the Hungarians had allotted (predictably, for a small fee to each car-owner) to this thriving free market.

The spectacle defies imagination. Each day, starting early in the morning, the Poles spread out their wares on the top of the boots of their Russian-made cars.

Everything, from razor blades and underwear, to hammers, screwdrivers, perfumes, shampoo and deodorants, and of course cognac, is available to the Russians, many of whom think this is a version of a consumers' paradise.

But the problem is that the Russians do not have enough forints to buy these goods which are in short supply at home.

Everything is sold in forints. And if the Russians dared to offer zlotys, the Polish units of currency, the Poles would pull a most unpleasant face.

"I wouldn't sell or buy zlotys against any East European currency," says Jacek. "It's rubbish money. Give us the forint or the rouble. But really, the forint is the only real hard currency left in the bloc," he opined, sounding like a banker.

"Sure, forints, we want forints," interrupts Leszek, who was busy counting his wads of rouble notes. "Here we're two real professionals black marketers with whom the Soviet tourists had to contend."

US warning to foreign investors

NEW REGULATIONS proposed

by the US Treasury are likely to force foreign businesses for the first time to seek US government approval for American mergers, takeovers and other investments before deals are concluded, Nancy Dunnne reports from Washington.

The regulations, required by last year's Trade Act under the "Exon-Florio" provision, give the US President broad discretionary authority to block or suspend mergers, acquisitions and takeovers on national security grounds if they result in control by foreigners.

The President could also act when acquisitions by US interests are financed by foreign

banks.

The US has traditionally opposed government screening of foreign investment. Thus, the Treasury has made registration of investments voluntary in a bid to minimise the impact on business.

These exclusions imply enormous inclusions and would make it very difficult in the case of most acquisitions to rule out the possibility that Exon-Florio will apply.

The regulations would create such widespread uncertainties that even joint venture partners with US companies could feel forced to seek approval.

Italy and Greece obstruct Lomé talks

By David Buchan in Brussels

THE PROSPECT of a relatively smooth re-negotiation of the Lomé Convention, the European Community's five-year aid and trade pact with 66 African, Caribbean and Pacific (ACP) countries, was last night shaken by protectionist demands from Italy and Greece.

At a meeting of development ministers stretching into the small hours of yesterday morning, the two Mediterranean countries balked at increases in imports of ACP figs, peaches and apricots, and so effectively prevented the European Commission from putting a fresh proposal to the ACP states

until early autumn.

Instead of having all summer to digest the Community's regaining position on trade issues, negotiators for the ACP states may now only get it after EC development ministers are next due to meet on October 2-3, barely a week before talks start in earnest on October 10.

The trade aspect of the Lomé Convention re-negotiation splits the Community. Northern countries like Britain urge generosity in trade rather than aid, while southern EC states argue the Community should concentrate on increasing grants and soft loans - which

amount to Ecu8.5bn (£5.7bn) in the current 1986-90 Lomé treaty - rather than let in more ACP products which often compete with their own.

The trade row overshadowed the makings of a compromise over geographical extension of the Lomé convention to cover the Dominican Republic and Haiti. This issue has pitted Spain, which has made the inclusion of at least one Spanish-speaking territory a virtual condition of its agreement to Lomé re-negotiation, against the UK which has come under heavy pressure from the English-speaking Caribbean to ensure the inclusion of these

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OVERSEAS NEWS

RECORD CURRENT ACCOUNT DEFICIT Australia's economic outlook darkens further

By Chris Sherwell in Sydney

AUSTRALIA'S gloomy economic outlook darkened further yesterday after statistics confirmed a record current account deficit of A\$17.7bn (£9.35bn) for the financial year which ended last month, worse than the most pessimistic expectations.

Preliminary monthly figures from the Bureau of Statistics put the June deficit at A\$1.63bn, at the higher end of analysts' forecasts. The bureau also revised the May figure upwards by A\$500m to a record monthly figure of A\$1.85bn.

The overall 1988-89 figure was equivalent to 5.2 per cent of gross domestic product, or around double the country's estimated sustainable level. It compares with A\$12.33bn the previous year and is an embarrassing 87 per cent higher than the optimistic A\$9.5bn deficit projected in the Labor government's Budget last August.

Despite the government's year-long attempts to dampen domestic demand through tighter monetary policy, some economists say the monthly figures - now running at an annual rate of more than A\$19bn - foreshadow another record deficit in the year just started.

Investors told to be cautious

By Andreas Utermann

INVESTORS are advised to reduce their equity exposure in Australia in a report by Citicorp, Scrimgeour Vickers, the Australian banking arm of the US Citicorp group, to be published today.

The firm expects a depreciation of the Australian dollar in the next four to six weeks from 76 US cents to 70 US cents at best and to an increasingly likely 60 US cents at worst.

The reasons cited for this are: an estimated 12-month cumulative A\$20bn current

account deficit; an end to support of the Australian dollar due to the forecasted peak in short term interest rates by the end of 1989; increased downward pressure on commodity prices; and volatility caused by the uncertain future level of the US dollar.

The report follows yesterday's announcement of a record current account deficit of A\$17.7bn for the financial year which ended last month and intensifies worries among investors that Australia, with

its external debt of US\$100bn, could become a "banana republic."

After a 10 per cent depreciation of the Australian currency earlier this year and the increase of short term interest rates to nearly 20 per cent, the prospect of a further fall in the Australian currency also confirms the "fall from grace" of investments in the so-called high yielding currencies, which until recently, played an important role in investors' portfolios.

The details behind yesterday's figures were revealing. In its visible trade, Australia notched up a record deficit of A\$4.23bn for 1988-89, far ahead of the previous record of A\$3.5bn in 1985-86, when the overall current account deficit

was A\$14.8bn. By contrast, visible trade last year was in balance.

Australia's exports increased by only 6 per cent over the year, despite strong commodity prices and continuing world economic growth. This rise was swamped by a 17 per cent surge in imports, a key element of which was aircraft and vehicle imports.

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predicted yesterday's figures as "further evidence of the government's economic mismanagement" but Mr Paul Keating, the Federal Treasurer, insisted he would stick by his present policies.

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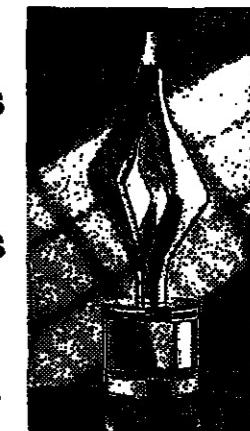
coal-fired boiler plant with dispersed gas heating equipment.

It improved the working environment, leading to increased productivity. And although the site is now 33% larger, actual energy use has been cut by 38%.

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AMERICAN NEWS

1991 US budget deficit concern

By Anthony Harris in Washington

THE US budget deficit for next year will be just above the target level on current trends, but the deficit ceiling for 1991 looks out of reach, according to projections released yesterday by the Administration.

The figures came in the White House's revised mid-term economic projections, which will be the basis for forecasting the 1990 fiscal deficit.

It is this forecast, due on August 25, which will determine whether Congress has kept within the limit of \$100bn set by the Gramm-Rudman deficit reduction law, in its final budget decisions; Mr Richard Darman, the Director of the Office of Management and the Budget (OMB), said yesterday that on present policies the target would be narrowly missed, but that the gap could be closed.

Growth is now predicted at 2.7 and 2.6 per cent for 1989 and 1990, compared with 3.5 per cent; Treasury bill rates at 8 and 6.7 per cent, compared with 7.4 and 5.5 per cent; and inflation (the GNP deflator) at 4.2 and 4.1 per cent compared with 3.7 and 3.5 per cent.

The deficit for the current year, which ends in October, is now forecast at \$143.5bn, down from \$164.1bn, reducing the cuts needed to achieve a \$100bn deficit in 1990. Current congressional policies are said to imply a projected deficit of \$110.5bn, just exceeding the 10 per cent leeway allowed under the Gramm-Rudman law.

The White House is campaigning for support for its proposed cut in the capital gains tax, which the Treasury claims would yield \$5.5bn in extra revenue and would bring the budget well within the target range; but the Democrats have rejected this as a concession to the rich and argue that any gains would be exhausted in the first year, making the task of achieving the 1991 target still more difficult.

The OMB report makes it clear that 1991 remains a grave problem. The Gramm-Rudman target is for a deficit of \$94bn, but current White House policies would produce a \$88bn deficit and those of Congress a \$105bn gap, according to the mid-term projections.

The new projections mark a large step towards a forecast for the economy which is consistent with the consensus, though they remain somewhat more optimistic. In both respects the revision follows the pattern of recent years. Dr Michael Boeckin, the chairman of the Council of Economic Advisers, pointed out that the White House growth projections have in fact been too low in 1987 and 1988.

The changes are not all unfavourable from a fiscal point of view. While lower growth and higher interest rates will reduce revenue and raise outlays, the higher inflation assumption implies higher revenue in the un-indexed US tax system.

RICHARD Johns looks at Mexico's ruling party and its public relations exercise at the polls

THE victory of the right-of-centre National Action Party (PAN) in the strategic state Baja California Norte represents a historic change in the complex nature of Mexican politics.

For the first time, the country's ruling Institutional Revolutionary Party (PRI) has conceded the loss of a state governorship and legislature to an opposition party.

Acceptance of such a loss may have been painful to many of the PRI old guard, but President Carlos Salinas de Gortari early on recognised that defeat would reap more dividends both at home and abroad. In this sense he has delivered on his commitment to clean and transparent elections.

Nevertheless, this public relations exercise has appeared gauche against the behaviour of the government-controlled electoral machinery in four other state elections, which were also held on July 2, and another on July 12.

Indeed, there appears to have been a deliberate attempt to ensure the wholesale defeat of the candidates of Mr Cuauhtémoc Cárdenas of the Democratic Revolution (PRD) in his home state of Michoacan.

Mr Cárdenas, who last year emerged as the leading opposition figure was a popular PRI Governor of Michoacan from 1980 to 1986.

In the legislative and municipal elections in the states of Chihuahua, Zacatecas, Campeche and Durango the PRI

has claimed its familiar clean sweep against less apparent election.

The election results therefore, the first real test of President Salinas after six months in office, cast doubt as to how fast he can, and will, move towards a more genuine politically pluralistic society.

The opposition parties for their part believe that Mexico can only overcome its economic problems in such a pluralistic environment.

The PRI had hitherto assiduously sought to combat the challenge of the PAN in the northern border states which see themselves increasingly in the orbit of the US.

Timid openings towards the PAN in the early stages of the previous de la Madrid administration were soon forgotten and old ballot-rigging practices soon prevailed.

Fraud in the northern states became the focus of international attention in 1986 when the PAN was deprived of victory by PRI chicanery in Chihuahua state elections.

According to recent testimony from Mr Rodolfo González Guevara, a veteran former Secretary-General of the PRI and now a somewhat disgruntled leader of the reforming "Critical Current" in the ruling party, the PAN was robbed by vote manipulation of victory in Baja California Norte in the last three gubernatorial races.

The consensus amongst independent analysts and observers watching the elections in six states - with the governorship only at stake in Baja California Norte was that conceding power in that state was decided upon in the Palacio Nacional in Mexico City.

This followed last year's flawed and hotly disputed national poll in which Mr Salinas defeated Mr Cárdenas, who was standing on a broad nationalist leftist ticket for the now defunct National Democratic Front, to gain the presidency.

Just before the July elections Professor Wayne Cornelius, an expert on Mexico and its relations with the US, went so far as to say at a seminar in San Diego that the only way that the PRI could win was by losing.

The consensus amongst independent analysts and observers watching the elections in six states - with the governorship only at stake in Baja California



President Salinas: recognising the dividends of a defeat

promised a \$900m development programme and went to great lengths to drum up the local PRI faithful and to exploit differences in the Cárdenas camp.

Even assuming some success on this front, it is hard to understand how the PRI-controlled electoral commission could claim the party won all 18 of the seats available in the state.

Mr Cárdenas' supporters for their part are claiming they have won all 18 and are blocking roads throughout the state in protest.

His poll-watchers operating often against considerable obstruction from the electoral authorities - just as the PAN vigilantes in Baja California Norte - monitored the voting in nearly all the booths and have showed that 64,678 votes were arbitrarily invalidated.

Some of the alleged "irregularities," which Mr Cárdenas intends to expose to the world media soon, have been standard PRI tactics. The main *cárdenista* charge is that en route from the voting booths to the central counting house the figures changed remarkably in favour of the PRI.

The decision to concede in Baja California, but to hold the election in Michoacan, reflects a PRI calculation about the nature of the opposition and the political threat that it poses. In last year's national elections, Mr Cárdenas won 64 per cent of the vote compared with Salinas's 23 per cent in the state.

The PAN candidate, Mr Manuel Clouthier, obtained only 12 per cent. The Cárdenista left-wing coalition obtained one of the two seats for the Senate and 12 out of 13 of those allotted for Chihuahua in the National Assembly.

Yet in the event it was the local PRI activists who were dismayed and angry when two

days after the poll, Mr Luis Donald Colosio, President of the PRI acknowledged that the PAN "Get out... death to *chilangos* (people of the federal capital)," they were reported to have shouted.

The calculation in Michoacan, a poor state in the South-West, was clearly very different. In last year's national elections, Mr Cárdenas won 64 per cent of the vote compared with Salinas's 23 per cent in the state.

The PAN candidate, Mr Manuel Clouthier, obtained only 12 per cent. The Cárdenista left-wing coalition obtained one of the two seats for the Senate and 12 out of 13 of those allotted for Chihuahua in the National Assembly.

To counter-balance such a vote in 1988, the government

had not changed its spots, but merely bleached them.

US reports progress on chemical arms ban

THREE US and Soviet Union have made substantial progress on a draft treaty banning chemical weapons but difficulties remain over verification, the State Department said yesterday, writes Lionel Barber in Washington.

At a recently concluded negotiating session, US and Soviet representatives reportedly reached agreement on a "mathematical formula" to eliminate chemical weapons arsenals over a 10-year period. They also agreed in principle to a comprehensive exchange of data, including sites for their production and storage.

A US official said: "We did get a fair amount of progress, more than anyone originally expected. But it's not true that we're on the edge of a ban on chemical weapons."

The New York Times yesterday quoted Mr Max Friederichs, head of the US delegation to the Geneva Conference on Disarmament as saying: "We've reached agreement on a very complete, detailed proposal for the conduct of challenge inspections [of sites]."

Diplomats said, however, that it was premature to suggest that the two superpowers had struck a workable

verification agreement.

President George Bush, returning home after his European tour, reacted sceptically to the report which said that the US and Soviet Union had reached agreement on "key elements" of a treaty banning chemical arms. "It would be a pleasant surprise," Mr Bush said. "Verification is what has thwarted agreement all along."

Mr Bush has made an international agreement on chemical weapons a priority since he tabled a draft convention in Geneva in 1984. Such a convention would be like the Nuclear Non-Proliferation Treaty and

could provide for an international agency to monitor compliance which would go beyond military facilities and include civil chemical industrial sites.

Even a superpower agreement, however, would not address the problem of the growing number of supplier nations.

Work on a chemical weapons convention has been going on for eight years in Geneva. US and Soviet negotiators have been working separately on an agreement which, they believe, could give a lead to the 40 other nations attending the Geneva conference.

Brazil unveils record monthly trade surplus

By Ivo Daway in Rio de Janeiro

BRASIL has reported a \$2.2bn trade surplus for June, the largest for a single month. The outcome gives a \$8.2bn result for the first half, which is also a record.

The sharp improvement on the previous two months has been, in part, attributed to exporters holding back sales in anticipation of devaluations of the New Cruzado's exchange rate.

Traders rushed ahead with sales early this year in anticipation of January's economic package. After taking advantage of high domestic interest rates, they have now returned to supplying foreign markets.

Mr Nairn Salek, the director of Cacex, the state trading agency, singled out steel products, vehicles and components and soya as leading the export surge which totalled \$3.6bn - up 21 per cent on the same month last year.

Imports also increased, though less substantially, rising \$32m on May to \$1.45bn. Independent economists believe that a recent 5.5 per cent increase in industrial output has come as a result of widespread destocking during the price freeze earlier in the year.

The positive result has led Cacex to increase its forecast for the year-end surplus. Some now believe that the \$16.5bn originally predicted could rise to a record for a calendar year, possibly above \$19bn.

Announcing the results, Mr Salek took pains to dismiss a claim by an independent economist last week that under-invoicing of exports and over-invoicing of imports meant Brazil was set to lose as much as \$10bn in foreign exchange earnings this year.

Mr Salek argued that only about \$5bn in export products could be subject to illegal reporting.

There is speculation that foreign exchange reserves could rise to \$8bn in September - the month a large \$2.23bn debt interest payment to foreign banks is due.

Argentine state groups face \$5.5bn deficit'

By Gary Mead in Buenos Aires

ARGENTINA'S state-run companies will be in deficit to the tune of \$5.5bn this year on current performance, Mr José Roberto Dromi, the head of Argentina's Ministry of Public Works (MOPR), said yesterday.

The deficits are financed in a variety of ways, ranging from straight subsidies from the treasury through transfers of cash, bonds and creative accounting.

Mr Dromi revealed that there are some 40,000 judicial cases outstanding against publicly-owned companies, many a result of failure to pay bills on time, or at all.

Mr Dromi's analysis of Argentina's public sector is preparatory to moves by the Peronist government to effect what he called a "serious adjustment" in public spending, the focus of which will be a law permitting the privatisation of all state-owned companies. The privatisation bill is due to be presented to the Senate, the upper house of Congress, in the next few days.

10 largest state-run companies will range from \$1.028bn in the case of the oil company Yacimientos Petrolíferos Fiscales to \$22m in the case of Obras Nacionales, which deals with sewage disposal.

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Guatemalan army weighs its might

Anson Ng looks at the pivotal military role amid rising discontent

IT IS characteristic of Guatemala's defence minister, General Hector Alejandro Gramajo Morales to remark, forthrightly, that on the one hand "the army directs the president, but on the other the president also manipulates the army."

President Vinicio Cerezo Arevalo has counted increasingly on the backing of a military faction headed by the controversial general, a pillar of the Christian Democrat Government, to prop up his beleaguered administration since taking office in January 1986. The alliance has weathered two coup attempts and several political plots.

Nonetheless, buffeted by pressure groups from the extreme right, cracks in the partnership are emerging and there is speculation that the US-trained General Gramajo, the central target of the coup plotters, will be substituted by an army hardliner. Such a development would undoubtedly circumscribe President Cerezo's movements.

The common notion which unites the military plotters and their civilian allies is that General Gramajo's counter-insurgency campaign is failing and that his populist tendencies will pave the way for an eventual Communist takeover.

The militiamen within the ultra-conservative business community, upset by the government's tax package, are thought to have provided financial help for the coup bids.

The hardliners advocate a war to annihilate the almost 30-year-old guerrilla movement. In contrast, General Gramajo stresses the importance of extending the fight into the political arena.

To the annoyance of the business sector, he has also criticised "feudal" land owners and labelled the far right as "subversives," a term hitherto reserved for the leftist guerrillas.

Talks held with the URNG leftist rebels in Madrid in 1987, when the Guatemalan army

was suffering notable casualties, particularly enraged the officer corps. The guerrillas, formerly strong have been reduced to about 1,500 combatants but they have continued to ambush army patrols, harass oil exploration teams and raid coffee farms.

The presence of Russian and Cuban journalists and by the return of prominent exiled opposition leaders is another irritant. Discontent in the armed forces has been further fuelled by relatively meagre amounts of military aid from the US (about \$3m in "non-lethal" equipment which excludes armaments).

Critics of the Cerezo Government believe the flow of US aid has been curtailed by Guatemala's reluctance to adopt an openly anti-Sandinista stance. Some diplomats, however, insist that the flow of aid has been hampered by budgetary constraints.

The most recent coup threat, in May, will almost certainly prompt concessions to appease the reactionary faction within the military, just as in the aftermath of the military revolt last year.

These coup attempts are likely heart attacks. They kill part of the system and affect the whole body. To survive, the patient has to accept certain restrictions," observed Juan José Rodil Peralta, the former Minister of Interior, who was removed in the wake of the 1988 army uprising. Mr Rodil was accused of forming a parallel security unit to challenge the military.

Mr Cerezo will probably be forced to divert already scarce resources to beef up military spending, to deploy more "aggressive" battlefield tactics against the URNG guerrillas and to narrow the political space granted to the left.

It is also rumoured that the President has had to grease the palms of several top army commanders to ensure their loyalty. Fear of a backlash from fellow army officers means that coup plotters are more likely to be discharged from

the armed forces or exiled rather than jailed. Several army officers have already been released while defence lawyers have disrupted proceedings by arguing they are unconstitutional.

The Government has secured a significant slice of the power traditionally monopolised by the economic oligarchs and the military. But the upshot of the military's still considerable influence in security matters, domestic policies and foreign affairs is that further talks with the guerrillas is off the agenda, contacts with the Soviet bloc have been ruled out and the security forces have escaped punishment for human rights violations.

Mr Cerezo has evidently eschewed radical structural reforms instead, implementing an orthodox combination of monetary and fiscal measures designed to stabilise the economy. The aim is to generate funds "to pay the social debt" of political instability generated, as the Government sees it, by rebel movements.

Cynics, however, view the state's social and infrastructure investment projects as a means of winning the vote of the rural electorate in the presidential elections scheduled for late 1990.

The support of the Indian majority in the rural communities is considered crucial, especially to his well-equipped country retreat.

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Mr. Wayne Densch, Orlando businessman, with his wife Ann, takes delivery of the first Starship from Beechcraft executives: Bob Brown, Starship marketing manager, Charles Dieler, executive vice president

UK NEWS

JULY 19 1989

Heathrow should relieve Gatwick chaos, says CAA

By Lynton McLain

THE GOVERNMENT was urged yesterday to remove the ban on holiday charter flights operating from Heathrow Airport to ease congestion at Gatwick, the UK's main base for charters.

The Civil Aviation Authority recommended the re-introduction of charter flights in evenings and at weekends in a report to Mr Paul Channon, Transport Secretary.

The CAA report called for government action on traffic distribution policy for airports serving the London area. It also called for an immediate start on planning additional runway capacity in the south east.

The extra runway capacity would be needed despite the recommended provision of greater passenger capacity at airports in London and the south-east and at regional airports. The CAA said in its report that the extra runway capacity would be needed "within a few years of the end of the century".

The authority also wants air taxis and corporate business aircraft to be given priority over general aviation light aircraft at Heathrow.

Mr Channon has already given the CAA the go-ahead to do more work on its analysis of runway capacity in the south east and to produce a computer model of capacity and demand for runways beyond the end of the century. This work will take a year and will delay the submission of the fully analysed recommendations of the

CAA, which were requested by Mr Channon by this month.

The full analysis will not affect the general recommendation by the authority that work must start immediately on planning the extra runway capacity.

The authority also advised Mr Channon in its formal report published yesterday that the Government did not need to introduce regulations to limit access by airlines to London airports.

The CAA said: "The interests of users are likely to be best served if the air transport industry is allowed to develop its own solutions to the shortage of capacity without additional regulatory intervention."

This is in line with general government policy of allowing market forces to determine the distribution of air services between airports, although the Government at one stage considered giving scheduled services priority over charters at Gatwick and placing limits on airlines' frequency of service at Heathrow.

The number of near-misses involving an element of risk in the skies over Britain increased last year, the CAA said in its annual report, also published yesterday.

Traffic Distribution Policy for Airports serving the London area - Advice to the Secretary of State, CAP 558, £5 plus £1 postage from CAA Printing and Publications Services, PO Box 41, Cheltenham, Glos. GL50 2BN.

Banks offer capital to small businesses

By Charles Batchelor

TWO British clearing banks, Barclays and National Westminster, are to offer venture capital finance to small businesses. This is the first significant move by British banks to provide equity finance for small business.

Both banks, which already have specialised venture capital subsidiaries, will provide small amounts of equity finance through their branch networks for the first time. The two banks are training selected branch managers to handle venture capital inquiries.

Barclays has allocated £20m to venture capital over the next two years, though this sum will be increased if there is sufficient demand. The bank will help companies which are starting up and established small businesses which want to expand.

Barclays' managers will handle initial inquiries but the assessment of the business proposal and the monitoring of the

companies' progress will be done by Barnsmead, an independent London-based venture capital company. Barclays will second its own staff to Barnsmead to gain experience.

The Barclay's scheme will be launched in September through the bank's 322 business centre branches. Investments will be assessed on conventional venture capital basis.

National Westminster Bank meanwhile is this week extending a pilot venture capital scheme throughout its branch network. It has already made three equity investments worth a total of about £1.5m under the pilot scheme.

Natwest has for the past three years run a Growth Options scheme under which it provides subordinated loans to small businesses with an option to convert some of the loan into equity. It has made loans worth £1m but expects this figure to increase to £2m by the end of 1989. The new scheme involves straight-up equity investments.

French see accord on environment watchdog

By John Hunt, Environment Correspondent

BRITAIN has dropped its opposition to proposals for an EC environmental agency according to Mr Eric Lalonde, the French Minister of the Environment, who yesterday had discussions in London with Lord Caithness, Minister of State for the Environment.

However, it is clear that neither side envisages a tough regulatory body along the lines of the US Environmental Agency. Instead, the European version is seen as an information-collecting organisation to provide impartial scientific advice to the EC Commission and the Council of Ministers.

This is in line with the British Government's belief, recently advanced by Mr Nicholas Ridley, Environment Secretary, that such a body is needed to counterbalance what he termed "misinformation" on green issues.

Britain's original fears that such an agency would lead to an infringement of national sovereignty now seem to have been laid to rest.

Mr Lalonde was visiting Britain just as France assumed the presidency of the EC Council of Ministers for six months. He said that France would make every effort during its presidency to establish the new agency and that Lord Caithness had agreed to this in their talks.

The Department of the Environment confirmed that there was a wide area of agreement during the discussions.

Mr Lalonde also emphasised that France would be pressing for standardised EC green labelling of products during its presidency.

That would cover not only the environmentally friendly nature of products in shops, but also the way products were produced and disposed of. Mr Lalonde thought that was essential to completion of the internal market in 1992.

France, he said, would also be pressing for a "realistic and workable" directive on freedom of environmental information. "It is a major concern to all our citizens to know what is happening about the environment," he said.

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New *Satellite Communications in Western Europe 1989*, CTT Research, 28 Dering Street, Hanover Square, London W1R 9AA, £3.95.

Business 'key to satellite profits'

THE REAL profits from satellite communication will come from business services rather than from business services rather than from public satellite television, according to a new report.

A review of satellite communications in Western Europe by CTT, the communications research group, forecasts that annual revenues from business services will total \$1bn by 1993.

Mr Chris Fleetwood, chief executive said last night the company's heavy engineering division had struggled to work at full capacity since nuclear

OFT to be given more power to enter and search businesses

By David Churchill

SIR GORDON Borrie, director general of fair trading, already one of the most powerful men in British business, is to get wide-ranging new powers of entry and search to weed out anti-competitive practices in industry.

The move, announced by Lord Young, Trade and Industry Secretary, in a white paper on restrictive trade practices, will give Sir Gordon the powers to uncover price-fixing cartels and other restrictive practices he has been seeking for the past decade.

Sir Gordon and his officials at the Office of Fair Trading have only been able to take action against price-fixing cartels, collusive tendering and other restrictive arrangements after they had firm evidence that such anti-competitive behaviour was taking place.

This has meant that the OFT has relied heavily on informers for its information — a practice which OFT officials believe has allowed numerous corpo-

Takeover rivals put business before battles

Hugo Dixon on the surprising new alliance between the warring GEC and Plessey

NEWS of the link-up between GEC and Plessey to apply for one of Britain's new and potentially lucrative personal communications licences is a demonstration of how cool business logic can still prevail in the midst of one of the most acrimonious takeovers the City of London has ever witnessed.

Over the past nine months, the two electronics companies have been fighting each other in the courts, the Monopolies and Mergers Commission and the financial markets.

Plessey and GEC have repeatedly been at loggerheads over the operation of GPT, their telecommunications joint venture, which is the biggest prize in the bid battle. Only a fortnight ago, Mr Stephen Walls, Plessey's managing director, accused GEC of bad faith following the breakdown of peace talks on ending take-over hostilities.

So it was something of a surprise to see the two companies entering into yet another collaborative agreement. Although the prime players, Lord Weinstein, GEC's managing director, and Mr Walls, were not present at the press conference to announce the deal, other executives from the two companies mixed with each other amicably.

The logic behind the link-up is that, in this case, two plus two probably add up to about 10. Separately, neither Plessey nor GEC had much chance of being awarded a personal communications licence. Together,



Business partners: Philip Parker, left, of Plessey, Brian Meade, centre, of GPT, and Tom Dougherty, of BellSouth, at the press conference to launch the new alliance

they are the clear front-runners.

Personal communications networks, a concept pioneered in the UK, are designed to begin operation in 1993 or 1994. Based on high-frequency radio links, they will compete with the cellular networks run by Vodafone and Cellnet and with BT's fixed-link service.

The Government has already said that one of the new licences will almost certainly go to a consortium led by Mercury Communications, BT's only rival for fixed telephones. There will be one or two others.

The danger of putting in separate bids was illustrated last year when both GEC and Plessey applied for licences to run

a telepoint service, a less sophisticated variety of mobile communications due to start later this year.

GPT originally wanted to apply for a licence. GEC was happy to let it but Plessey blocked it. As a result, both parents put in an application but neither of them received a

Some GEC executives feel that both companies' applications were stymied by acrimony over the takeover bid which had just been launched. The Government could not evaluate the application properly, it is thought, because of uncertainty over who would control the operation at the end of the day.

A joint application, by contrast, has many benefits,

including the fact that each player has eliminated its major competitor for a licence.

Although the Government is keen that there should be foreign investors in the new networks, the major ownership is to be British.

With BT and Racal Telecom prevented from applying because they run the existing cellular networks and Mercury already promised a licence, the only electronic majors still in the running, apart from GEC and Plessey, are STC and Ferranti.

Both of these companies will presumably still want part of the action but it is now difficult to see how either could construct a more formidable consortium than GEC and Plessey.

DTI curbs brewer sales of free pubs

By Lisa Wood

BRITAIN'S big brewers will not be able to sell off pubs free of the tie without disposing of an equal number of their tied outlets, Lord Young, the Trade and Industry Secretary disclosed yesterday.

Lord Young, who last week announced that brewers owning more than 2,000 pubs would have to release from the tie 50 per cent of their outlets over that number, was giving evidence before the Commons agriculture committee, chaired by Mr Jerry Wiggin. The tie is the system in Britain whereby a pub tenant is obliged to take his brewery owner's beer.

Lord Young said the formula was "dynamic" because future acquisitions and disposals would be affected.

He said brewers who decided to put low-barrelage rural pubs into their quota of free houses and then decided to sell them might think twice if they then had to free a similar number of their tied houses in order to satisfy the 50/50 ratio.

Lord Young said he had taken a step-by-step approach to the report of the Monopolies and Mergers Commission and there would be a review in three years to see whether or not competition had improved in the industry.

Last big British radiator maker faces sale

By Richard Tomkins, Midlands Correspondent

LLANELLI Radiators, the former Rover Group component subsidiary bought by Calsonic of Japan last month, is to open a manufacturing facility at Shildon, County Durham with an initial investment of £2m, John Griffiths writes.

The plant, which will make vehicle heating systems, is to go stream within the next three months. It is expected to employ 50 people by the end of the year and initially will supply Nissan's car-making operations at Sunderland, Tyne and Wear.

Other recent examples have included the purchase of Delahaye, Britain's biggest car heating company, by Valeo of France, and the purchase of Armstrong Equipment's shock absorber division — again, the UK's biggest — by Monroe Auto Equipment of the US.

IMI Radiators has annual sales of £30m. It employs just under 300 people, some at its headquarters and main factory

in Shipley, West Yorkshire, and the rest at two other factories in nearby Leeds.

Its output consists mainly of high-performance and specialised radiators for cars, lorries, tractors and construction equipment. The biggest customers for its car radiators are Volkswagen, Jaguar, Volvo, Mercedes-Benz and Ford.

Most radiators for UK vehicles are produced either by the car manufacturers themselves or bought in from affiliates or overseas suppliers.

IMI emphasised yesterday that it was examining a number of options for the future of its radiator business including outright sale, some kind of joint venture, or retention. A decision, it said, was unlikely before September.

Other recent examples have included the purchase of Delahaye, Britain's biggest car heating company, by Valeo of France, and the purchase of Armstrong Equipment's shock absorber division — again, the UK's biggest — by Monroe Auto Equipment of the US.

IMI Radiators has annual sales of £30m. It employs just under 300 people, some at its headquarters and main factory

in Newton Aycliffe, about eight miles across the A1(M) road.

About 100 will remain in Darlington at the company headquarters, where Whessoe's projects team and computer division will also be based.

Whessoe also owns Altona, a high pressure pipework manufacturer in Derby, as well as subsidiaries in Australia and Ireland.

plant for the gas cooled system, particularly at the Heysham and Sheerness nuclear power stations.

He said: "We are looking for a better strategic balance that will build on our strengths in design, manufacture and systems control. In future we will sub-contract our heavy manufacturing."

Whessoe's Darlington shop had specialised in making

power stations had switched from advanced gas cooled to pressurised water reactors.

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UK NEWS

Public borrowing rise may reflect slower growth

By Simon Holberton, Economics Staff

SIGNS THAT the slowdown in economic activity may be feeding through to the Government's finances were indicated yesterday when the Treasury disclosed that the Government had borrowed £700m in July.

In the first three months of the financial year, the public sector borrowing requirement was £200m. In the same period last year, the Government had repaid £1.2bn of debt and was on course for a record debt repayment of £1.8bn.

Mr Nigel Lawson, the Chancellor, forecast a surplus of £1.6bn in his budget, he hinted subsequently that it could be up to £2bn less than that because of the effect on revenue of the take-up of personal pensions.

The June PSBR figure was the third in succession that was worse than analysts had expected. However, they are all the same reluctant to change their forecasts of a large debt repayment this year.

They point out that, although Mr Lawson will lose some revenue, he could more than recoup it through higher inflation, strong growth in earnings and employment. On the spending side, the Government remains committed to rigorous spending controls.

Mr Simon Briscoe, the economist at Greenwell Economics, said:

Welsh land authority reports record profit

By Anthony Moreton, Welsh Correspondent

THE LAND AUTHORITY for Wales produced a record profit before tax of £7.6m last year, reflecting the strengthening of the Welsh economy, Mr Geoffrey Llinin, its chairman, said yesterday. The profit compared with £1.3m in the previous year.

The Land Authority was set up in 1976 and has no counterpart elsewhere in the UK. Mr Llinin, who presented the authority's annual report in Cardiff, said it existed to put together parcels of land for development.

It had played "a leading role in the regeneration of the Welsh economy."

One package of land in Cardiff's docksides, for instance, where a comprehensive redevelopment is taking place, was in more than 90 hands. The authority was able to bring these divergent interests together quickly into one holding in a way no single developer could have done.

This power has allowed the authority to take a leading part in town centre developments in Cardiff, Caerphilly, Merthyr Tydfil, Llandudno, Newport and Carmarthen.

The authority had been said:

Walker extends valleys programme for two years

By Anthony Moreton, Welsh Correspondent

THE VALLEYS programme has been extended for a further two years. It was launched a year ago by Mr Peter Walker, Secretary for Wales, to rejuvenate the economically troubled South Wales valleys.

The programme was originally meant to end in 1981. Mr Walker explained the extension by saying that "the record levels of investment in industrial support, factory building, land clearance, urban renewal, and all the other initiatives involved in the programme are beginning to bear fruit."

Mr Walker claims the valleys have had "a good year" since the programme was launched.

Minister hits back at monetarist critic

By Martin Wolf

MR PETER Lilley, Economic Secretary to the Treasury, yesterday defended the Treasury's monetary policy against attack from the monetarist economist, Mr Tim Congdon, economic adviser at Gerrard and National, the City discount house.

In remarks to a conference organised by the Centre for Policy Studies, an independent think tank, he argued that Mr Congdon's criticisms were wrong in key respects.

Mr Congdon had argued in a CPS pamphlet *Monetarism Lost* that the present upsurge in inflation was caused by the abandonment of targeting of the broad monetary aggregates.

Mr Lilley countered by pointing out that most of Mr Congdon's analysis had been in terms of M3 (which excludes deposits in the building societies), of which the growth rate more than doubled between 1984 and 1987.

But growth rates of M4 (which includes such deposits) "were not at all out of the ordinary."

While admitting that inflation in the UK remained higher than in its main competitors, Mr Lilley suggested that the reasons for this were complex. In particular, the relation between economic growth unadjusted for inflation and the broad monetary aggregates had "been anything but close or reliable."

Steering monetary policy on the basis of broad money targets alone "would have produced changes in policy which were erratic and frequently wrong."

Mr Lilley argued not only that the increase in inflation has been exaggerated by the inclusion of mortgage interest, but that "since early 1986, inflation in the UK has risen by no more than other major developed countries."

He advanced three reasons for this increase in inflation worldwide: financial deregulation, the lagged effect of the oil price fall of 1985-1986, and the lower interest rates which followed the 1987 stock market crash.

But the effect of these changes were greater in the UK because of the relative importance of the oil sector, the growing confidence of the private sector and the abolition of mortgage relief for house sharers in 1988.

Mr Congdon replied that all measures of broad money had indeed shown faster growth from 1985 onwards. Unfortunately, the Treasury continued to misunderstand money, the main element in which was bank and building society deposits, not cash, the component now targeted.

The right solution would not be to join the exchange rate mechanism of the European Monetary System, but to accord the Bank of England the independence enjoyed by the Bundesbank, he said.

The authority had been said:

Steel group wins free enterprise body's award

By Ian Hamilton Fazey, Northern Correspondent

ASW, the Cardiff-based steel company that was the largest management buy-out when bought from its parents, GKN and British Steel, last year, has won the Welsh Free Enterprise Award for 1989.

Two other awards have been granted this year, their first anniversary, since being launched by Aims of Industry.

One goes to Mr John Humphries, editor in chief of the Western Mail and newly launched Wales on Sunday.

The other was presented in Cardiff yesterday by Welsh Secretary Mr Peter Walker to Professor Derek Embrey, technical director of AB Electronic Products.

Mr Malcolm Field: British love to collect things

Each shop has a fascia designed to look like an old Odeon-style cinema, and is supplied with stock by Parkfield Entertainment, which claims to be the leading distributor of entertainment prod-

Taxing question resolved for road injury victims

Eric Short on a case that made insurance history

LEGAL history and motor insurance history were made in the High Court last week when damages in a motor injury claim were awarded in the form of a structured settlement - part cash sum and part income.

Structured settlements are common in US damage awards, but, until last week, unknown in the UK, where settlement has invariably been as a cash sum.

The advantages of a structured settlement compared with an equivalent cash sum are, first, the general flexibility - in that the structure can be designed to meet the needs of the particular claimant.

Second, it takes out all the guesswork required in agreeing a lump sum award as to the life expectancy of the claimant. The life risk can be passed to a life company by purchasing an annuity.

Finally, it avoids the problems involved with investing the cash sum to provide an income.

The drawback to structured settlements in the UK was the attitude of the Inland Revenue towards the income element which was regarded as taxable.

However, an agreement was reached in September 1987 between the Treasury and the Association of British Insurers that annuities in damage awards could be paid tax-free.

Last week's case was the first to be arranged in the

wake of this agreement, though, ironically, it was a Lloyd's motor syndicate KGM Motor Policies that arranged the settlement.

However, the tragic circumstances of the case were such that a structured settlement was the most suitable.

The victim, 25-year-old Mrs Catherine Kelly, was involved in a car accident in 1985 which killed her husband and left her in a coma on a life support machine.

The overall settlement of £416,000 took the form of a cash payment of £110,000, with the remainder cash being used to provide an index-linked annuity starting at £2,130.16p a month (£25,561 a year) with payments increasing each year in line with the Retail Price Index. The annuity payments are guaranteed for at least 10 years. All payments are free of tax.

A settlement in this form ensures an income increasing in line with inflation for the rest of Mrs Kelly's life. The 10-year payment guarantee ensures that adequate compensation will have been made should she die soon after the award.

However, the payments are tax-neutral, rather than tax-free. The Inland Revenue requires the annuity payments from the life company to KGM to be net of tax and KGM has to reclaim the tax from the Revenue every year.

KGM is making the monthly payments gross, even though the tax will be reclaimed at the end of the year. Negotiations are still taking place between the two sides over the tax payment.

Now the ice has been broken, the way is open for structured settlements in damage cases. Motor insurers are reporting that US firms, experienced in arranging such settlements in their domestic market, are now starting to offer their expertise in the UK.

Motor insurers, in general, are not too concerned whether damages are paid in a lump sum or in a structured settlement.

The former method is clear-cut. A sum is agreed, paid and the claim goes off the books.

With a structured settlement, there is more negotiation in agreeing both the form and the size of the settlement, with experts on both sides giving conflicting views over the life expectancy of the claimant.

This, in turn, could mean more costs in agreeing a settlement. In addition, the case remains on the books until the claimant dies.

Nevertheless, the structured settlement, as an alternative to a cash sum, means there is greater flexibility in the provision of compensation for personal injury and the financial needs of the claimant and any dependants.

EMPLOYMENT

Ambulance crews plan ballot on action over pay

By Michael Smith, Labour Staff

AMBULANCE crews are threatening to take their first industrial action in seven years in a dispute which will test the Government's resolve to keep down public sector pay settlements following British Rail's offer of an 8.8 per cent deal.

Nupe, the public sector union, is to press for a ballot on action among Britain's 19,000 ambulance staff after saying yesterday that its 12,000 members in the service had voted by two to one to reject a 6.5 per cent offer.

The unions will meet to consider their next move on Tuesday, ahead of a meeting that day with employers. An overtime ban and a refusal to handle paper work are likely to be under consideration, rather than all-out strikes.

Unlike other public sector disputes involving the BBC, rail workers and local government staff, the Government has a direct say in the ambulance agreement since Mr Kenneth Clarke, Health Secretary, has to approve a settlement.

Mr Roger Poole, general secretary designate for Nupe, said the Government had backed ambulance workers into a corner. Health authority employers, who are funded by the Department of Health, had said

the 6.5 per cent offer was final and had failed to heed union calls to refer the dispute to arbitration, he said.

"The only option left is to take industrial action."

The two to one majority for rejecting the 6.5 per cent offer was achieved in a ballot which attracted a 71 per cent turnout among Nupe members.

Ambulance crew members of the GMB general workers' union voted by a similar majority to reject the proposed deal. Colleagues in Cossie, the health service union, and the TGWU general union are also believed to have voted for rejection.

Mr Poole said 6.5 per cent was considerably lower than other offers in the public sector. "It is crazy and dangerous for the Government to play around with workers in one of the country's three emergency services."

Unlike police officers and firefighters, ambulance crews do not have their pay rises linked automatically to rises among other workers. The unions want their three-year-old claim for inflation-proof rises should go to arbitration along with this year's claim.

The 6.5 per cent offer would increase a qualified ambulance staff's annual pay from £10,033 to £10,749.

TV group to impose new work practices

By Charles Leadbeater, Labour Editor

YORKSHIRE Television is to press ahead with plans to implement far-reaching changes to working practices, pay systems and working hours in spite of staff vote rejecting the changes.

The company is to send letters to the 1,651 staff asking them to sign new contracts of employment by August 4. Those refusing to sign will be warned they could be dismissed from early September.

The company's move follows a ballot in which 516 staff voted to reject the proposals and 311 voted to accept them.

Under the proposals, more than 100 grades would be reduced to eight salary bands crossing technical and clerical grades. Workers would progress through the bands according to appraisals of performance. The company hopes to gradually introduce elements of multi-skilling.

Lord Gifford said he wanted an official inquiry to look into the timing of the raid. He claimed that Mr Scott had been stopped and visited by police several times in recent weeks and warned "not to let the side down."

In his affidavit, Mr Scott alleges that senior officers ignored his reports of hard drug dealing in Toxteth and

wanted the community to "dope itself up" to "keep the lid on" and avoid further public confrontation.

Lord Gifford's report says that black people in Liverpool have been denied access to jobs more systematically than any other black community in a large British city and that they are exposed to threats, taunts, abuse and violence if they venture outside a confined area of the city.

This leads to a "devastating" lack of mobility, which is not helped by the failure of Liverpool City Council to promote equal opportunities in its own workforce and services.

Mr Kevan Coombes, leader of the council, said that the problems would be addressed.

Mercyseide Police said that the report had not acknowledged the strenuous efforts made by this force to carry out its difficult and at times dangerous task of policing an inner city area.

Loosen the Shackles, a first report of the Liverpool 8 Inquiry into race relations in Liverpool by Lord Gifford QC, Wally Brown and Ruth Bundry. Karla Press, London N17 9TR. £7.95.

Broadcasting unit's merger is opposed

By Raymond Snoddy

THE Broadcasting Complaints Commission, which is responsible for examining complaints of unfairness by broadcasters, yesterday launched a campaign for its own survival as a separate body.

In its annual report the commission rejected suggestions from the Government that it should be merged in some way with Lord Rees-Mogg's Broadcasting Standards Council, the body that monitors the portrayal of television on sex and violence.

"The BCC usually has to establish disputed facts and then reach an objective decision, while the BSC will simply look at undisputed facts and reach a subjective decision on them," argues the commission, which is chaired by Lady Andreecey.

In the white paper on broadcasting which was published in November, the Government claimed it might be "more rational and less confusing to the viewer" if the two bodies were combined, possibly with separate panels for the separate functions.

The commission says its procedures have to be thorough because its work can be compared with a quasi-judicial tribunal, subject to judicial review.

As a quasi-judicial body, the commission's considered view is that it "cannot be merged with a body intended to cover the establishment and monitoring of programme standards in specific areas."

The commission received nearly 350 complaints last year. Twenty-one complaints, all of them involving unjust or unfair treatment, were upheld, 12 in part only.

Five were also complaints of unwarranted infringement of privacy.

women has also increased. In 1987 8.7 per cent of women in the non-industrial Civil Service worked part time but by last year this rose to 10 per cent.

By the end of last year, 15 departments were providing holiday pay schemes, compared with eight in 1987.

The Home Office, Ministry of Defence and Civil Service College are developing plans for nursery facilities for the under fives and other departments are assessing the likely demand for such schemes.

In addition, 13 departments have established keeping-in-touch schemes for staff who resign for domestic reasons.

In a parliamentary written reply, Mr Luce said: "We cannot afford to waste talent or ignore the skills and abilities of an important and growing section of the labour force."

More women joining top jobs in Civil Service

By Michael Smith, Labour Staff

WOMEN ARE increasingly being appointed to middle and senior management jobs in the Civil Service, say Government figures published yesterday.

Mr Richard Luce, Civil Service Minister, said the increasing availability of part-time work, child care facilities and career break schemes would help the trend to continue.

In Care Break and Childcare Provision in the Civil Service, published yesterday, the Cabinet Office says that in 1988 women accounted for 5 per cent of staff in the top three grades, compared with 4 per cent a year previously.

They increased their representation among grade 5 from 8 per cent to 9 per cent; among grade 7 from 8 per cent to 10 per cent; and among executive officers from 34 per cent to 37 per cent.

Part-time working among women has also increased. In 1987 8.7 per cent of women in the non-industrial Civil Service worked part time but by last year this rose to 10 per cent.

Women form just 1 per cent of Ucatt's 260,000 members. The union hopes to increase the share to a third by the turn of the century.

The guide says: "By the year 20

UK NEWS - EMPLOYMENT

Unhappy Knapp takes hard line with BR

Fiona Thompson on the NUR leader's vain attempt to promote a more moderate line

MR JIMMY KNAPP was not a happy man when he walked into his 11.14pm press conference on Monday night.

The general secretary of the National Union of Railwaysmen looked exhausted and drained - a state not simply due to the previous nine hours spent locked in debate with his executive.

Even the traditional cup of tea he always has before facing the press did not appear to have helped - he was a man with bad news to deliver and it showed.

The NUR's 21-strong executive had voted by 12 to eight (one member was on holiday) to reject British Rail's 8.8 per cent pay offer and to go ahead with yesterday's fifth, 24-hour strike.

Mr Knapp had pushed hard for an alternative course - to reject the offer but to suspend the strike action pending further talks at the conciliation service Acas. This was rejected by the same 12 to 8 vote.

He fought his corner but ultimately could not garner enough support for his more

moderate stance.

After having won almost universal plaudits for his conduct since the five-week long dispute began, Mr Knapp knew he could now expect a barrage of government criticism and righteous indignation from British Rail. But more importantly, he knew that the NUR risked losing at a stroke the sympathy it had won from the travelling public in spite of its four 24-hour strikes.

There was no contingent on the executive voting for outright acceptance of the offer - there were hesitations over both the pay side and the question of what BR was actually guaranteeing on bargaining machinery.

On Friday, all 190,000 BR staff have been offered 8.8 per cent and the 64,000 staff in London and the south east will get between 10 and 15 per cent because of extra allowances.

In spite of its reorganisation in 1978, however, the NUR's executive does not reflect the regional balance of its membership, and executive members representing areas outside London and the south east have a

proportionately higher weighting on the board.

As a result, although a substantial proportion of NUR members would qualify for the higher increases, executive members representing workers who only qualify for the flat 8.8 per cent were not keen to

surprising. Mr Richard Hyman, professor of industrial relations at the University of Warwick, was one of the three authors of the Warwick Report, a year-long inquiry into the NUR commissioned by the union and based on an extensive survey of its members.

On the question of bargaining machinery, in spite of acknowledging that the BR board had moved significantly by giving a commitment that pay and conditions would continue to be negotiated nationally, the executive was deeply suspicious of its position - in the light of BR's actions over the past week.

When making the commitment to resume national negotiations on pay and conditions during last Friday's Acas talks, BR also said all existing national agreements would be honoured.

The union said yesterday, however, that this commitment was not in the document BR sent to the NUR for approval - hence the suspicion. To some NUR watchers, the executive's decision was not

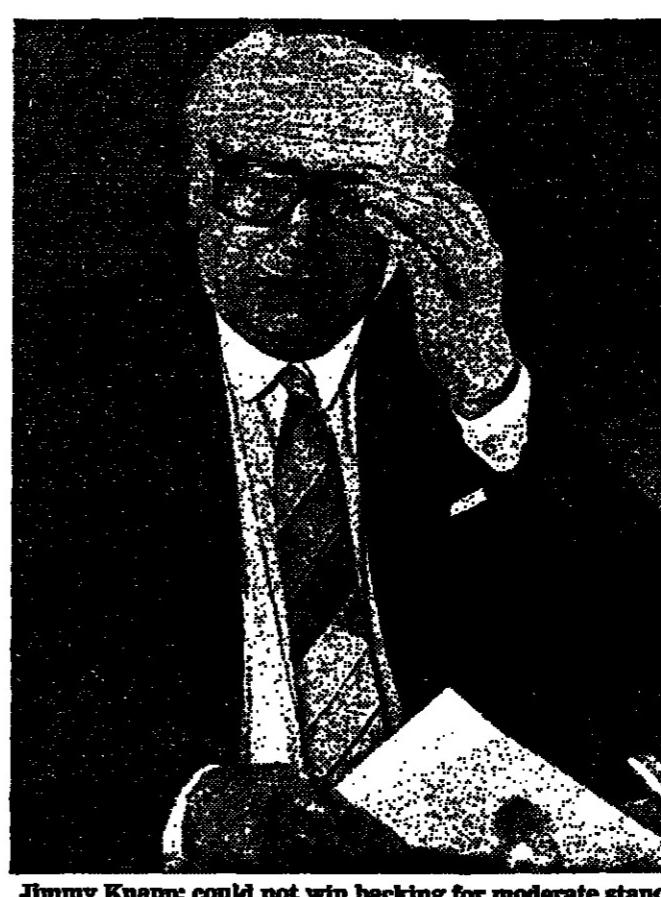
day night's split. From all corners, the internal opinion on Mr Knapp is one of respect. He has always been anxious not to steamroll the executive - while he will make his own view known very clearly, he will not impose it.

Above all, he wants to hold the union together. He knows his executive inside out and clearly had a feel for what was to come when, leaving Acas at 8pm on Saturday, he intimated that he did not think his executive would stomach the offer.

Had the board members but recommended it, Mr Knapp would have given them an early warning when he argued very hard then that they should improve the offer "even as a gesture."

Having fought and lost, however, there will be no further divisions.

The NUR's policy is to unite behind a policy once it is agreed, so there will be no opportunity to change Monday night's decision until both sides have resumed talks at Acas.



Jimmy Knapp: could not win backing for moderate stance

Talks called to settle council staff pay dispute

By Michael Smith,
Labour Staff

LOCAL GOVERNMENT employers are likely to meet union leaders of 500,000 white collar workers tomorrow for first time in a fortnight and try to resolve a dispute which is causing severe disruption to council services.

The meeting would coincide with the final day of a three-day strike by members of Nasco, the local government union, which has disrupted or closed social service offices, libraries, day care centres and rates offices.

The employers' side, which suggested the meeting to the union, said there was no prospect of it changing its pay offer at the talks, which would be informal.

Nasco, the local government advisory body, said yesterday that the employers wanted to ensure they fully understood Nasco's position. They would take stock of the position at a formal employers' meeting on Monday.

Nasco leaders believe that pressure is growing on councils to increase their 7 per cent final offer after the 8.8 per cent offer made by British Rail to its workers. They said yesterday that if there was no significant movement both on the level of increase and the strings attached to it, they would ballot on further industrial action.

However,

the union is almost certain to hold back from carrying out earlier threats to ballot for an indefinite strike. Instead, it is likely to seek support for weekly one-day strikes across Britain and smaller localised stoppages.

The two sides continued to dispute each other's estimates of support for the strikes, which began two weeks ago.

Nasco said about 470,000 members were on strike yesterday, an increase on last week's total, but Nasco estimated that less than 50 per cent of the union's membership was out, and the figure was declining.

Nasco is seeking 12 per cent or £1,200 a year, whichever is higher, and wants the employers to drop plans to allow councils more freedom to interpret national agreements.

Time for bluffing nears the end in the dockers' dispute

Jimmy Burns looks at the tougher attitude of the port employers who claim more dockers are returning to work

The time for bluffing in the docks dispute appears to be over.

Employers last night claimed that the trickle in the return to work in recent days was poised to turn into a flood, with support for the strike close to crumbling in Grimsby and Immingham, one of the largest port operations in the country.

They have also indicated that they could soon begin to sack dockers who continue to strike at ports where support has seemed most solid, namely Liverpool, London and Southampton.

TGWU transport union officials meanwhile appear to have had their spirits lifted by the pledge made by dockers' leaders in continental ports that they will refuse to handle diverted cargo.

They say they are prepared for a lengthy strike and have warned that no docker will return to work until the last of his dismissed colleagues is

reinstated.

Whatever the final outcome of the dispute, the first ten days of the strike has already turned Britain's docks industry inside out, with 1,850 dockers of the 9,200 formerly registered under the Dock Labour Scheme taking redundancy payments.

As Mr Stuart Bradley, managing director of Associated British Ports, the biggest port employer, put it yesterday: "What is happening now in the port industry is setting out the basis for the next 50 to 60 years. We're talking about restructuring the industry."

ABP owns 19 of the 60 ports formerly registered under the Dock Labour Scheme - equivalent to 25 per cent of Britain's total port capacity. Since the dispute began, 1,000 of its 1,720 registered workforce have taken voluntary severance under the Government's compensation scheme.

Mr Bradley says that the

ASSOCIATED BRITISH PORTS		
	Dockers employed pre-strike	Dockers accepting severance
Hull	510	238
Goole	135	72
Grimsby	10	10
Immingham	18	6
General Workers Stevedores	62	47
Southampton	307	148
Berry	35	21
Newport	175	84
Swansea	78	78
Ayr	14	14
Fleetwood	44	4
Garston	58	58
King's Lynn	49	36
Loweaton Container Terminal	12	12
Plymouth	14	11
TOTAL	1,720	1,000

* Ports ex-serv.

abolition of the Dock Labour Scheme which set manning levels by joint agreement with the union has forced ABP management to make a "microscopic examination" of the labour force that is needed in each port.

In practice, this has meant that ABP has gone faster and further in trimming its workforce than British Coal during the miners' strike. Rather than wait for the strike to end before making substantial job cuts, as British Coal did, ABP

appears to be wiping the slate clean from the outset before starting afresh.

The effects of such a strategy has already been felt in the ABP port of Garston, on the River Mersey, where the entire former registered dock workforce of 58 took voluntary severance in the first week of the dispute.

Operations at the port have been resumed, with management redeploying its other employees to do dock work if necessary and customers providing their own labour for discharging and unloading cargo.

Grimsby and Immingham, one of the largest port operations owned by ABP, has the bulk of its workforce still officially on strike. Yet there, too, local management has managed to insure the continuing operation of the port.

At the port, 105 of the 720 dock workers have taken voluntary severance, while just over 400 were still on strike

yesterday. With about one third of its original workforce back at work, the port yesterday had 16 ships being worked normally, although trade in steel products which normally averages about 20,000 tonnes per week is believed to be down to about 2,000 tonnes.

Even in Southampton, where support for the strike has seemed most solid, 13,000 tonnes of cement have been piped in and out of the port thanks to technology now available on self-discharging ships.

Nevertheless, the port's container operations which require skilled dock workers have been held up by the strike, forcing ABP to issue letters to the strikers that they will be sacked unless they return to work.

It could take management between two and three weeks to train a skilled replacement labour force and re-allocate its

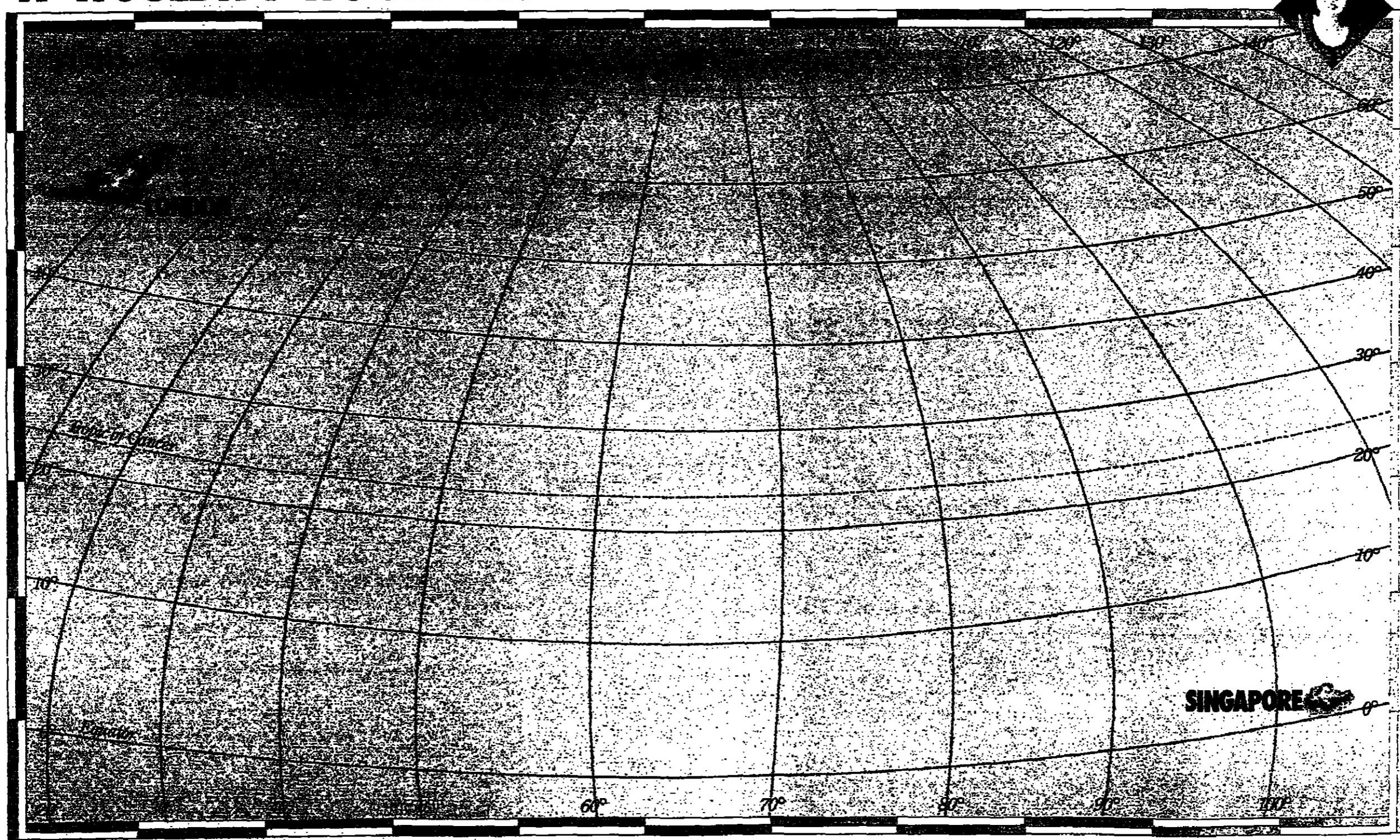
non-striking employees into an effective operational force.

If this proves difficult in the short term, the company has not ruled out taking advantage of its diversified asset structure to make more areas of its ports available for property development.

Of the 7,000 acres of land owned by ABP around the country, 2,500 have already been set aside for property development, and property now accounts for an equal share, along with ports, of the company's total profits.

Union officials see what ABP is doing as nothing more or less than what they said it would do - that is, riding roughshod over dockers' jobs and long established working arrangements the moment the Dock Labour Scheme was abolished. But since the dispute began they have shown themselves unable to dictate the scope and pace of change.

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Paper Assets:

Managers hope to win public sympathy in strike

Boost for rail chiefs as union remains divided

By Kevin Brown, Transport Correspondent

MORALE was rising among British Rail's top managers yesterday as the extent of disagreement among the executive of the National Union of Railmen became clear.

The mood at BR's Euston House headquarters changed overnight from deep gloom over what seemed like almost total victory for the unions to virtual disbelief at the NUR's tactics.

"The NUR have delivered themselves into our hands. Having played it very skilfully all the way through the dispute they have now made a serious mistake," said one senior manager.

BR was considering its next move last night, but executives said they expected pressure on the union to increase rapidly as public sympathy drains away.

Officially, BR was saying there were no victors in the agreement reached earlier this week with Aslef, the train drivers' union, and the Transport Salaried Staffs Association, which represents white collar staff.

However, senior managers were admitting privately that the settlement represented a serious defeat on both pay and changes in the national bargaining machinery.

The NUR's decision to continue the dispute was seen as a public relations gift which would deflect much of the anger directed at senior managers by both passengers and government ministers.

"We made every mistake in the book, but this gives us an opportunity to save something from the wreckage," said one executive.

Euston House was buzzing with rumours about the future of Mr Trevor Toolan, BR's personnel manager, who drew up the pay and conditions proposals which led to the dispute. Mr Toolan was closely identified with BR's hard line at the beginning of the dispute, and was eventually overruled by Sir Robert Reid, BR chairman. Managers pointed out that Mr Toolan's strategy had been endorsed by BR's executive directors, including Sir Robert, and there was no suggestion that he might be sacked.

There was speculation, however, that Mr Toolan would find his position intolerable following the failure of his programme.

Sir Robert was widely thought to be safe from dismissal given his success in bringing the corporation into profit over the last five years, and his intention to retire in March.

But the outcome of the dispute was thought to increase the likelihood that the next chairman would be recruited from outside BR.

The man being most frequently mentioned by senior managers is Mr David Simon, managing director of British Petroleum since 1986, who is thought to be top of the Government's shortlist for a tough outsider.

Baker eases path for foreign teachers

TEACHER shortages in London and the home counties were admitted by Mr Kenneth Baker, the Education Secretary, in the House of Commons last night as he made it easier for recruits from overseas to attain qualified status, writes Ivor Owen.

He announced that local education authorities would have discretion to grant qualified

status to overseas teachers after they had worked satisfactorily for a single term, instead of a year, as at present.

Mr Baker envisaged that this change would be particularly attractive to teachers from Australia and New Zealand, who were already playing a significant role in schools in inner London boroughs.

He rejected Labour charges

that the shortage of teachers had reached "crisis" proportions and stressed that the position varied from one part of the country to another.

But he acknowledged that the number of teachers resigning from posts with the Inner London Education Authority, some 1,439 this year compared with 1,308 last year, was still "unacceptably high."

Tough laws planned for restrictive practices

By David Churchill

TOUGH laws to tackle restrictive trade practices in UK industry and commerce, including substantial fines for both companies and directors, were announced yesterday by Lord Young, the Trade and Industry Secretary.

The Government's proposals, outlined in a policy document reforming Britain's 30-year-old restrictive trade practices legislation, will also for the first time bring the professions within the scope of restrictive practices law.

The proposed legislation will also include tougher powers of investigation for Sir Gordon Borrie, director general of the Office of Fair Trading, to uncover restrictive agreements.

These will include the powers of search and entry, using force if necessary, and are similar to those already available to competition officials from the European Commission.

But the Government has decided to give powers of enforcement, including the levying of fines, to a strengthened Monopolies and Mergers Commission.

It has decided to scrap the present system of controls of restrictive trade practices under which all agreements must be registered with the Registrar of Restrictive Trade Practices in London.

The Government believes that this system concentrates on the form of agreement rather than its effects. Thus, it has decided to bring in a general prohibition of restrictive agreements, such as price-fixing cartels, collusive tendering, and market share arrangements.

Few exemptions will be made, the Government says, except for where the law conflicts with the EC and other international agreements. This means that the Channel Tunnel will not fall within the scope of the new law, although the professions will.

The legislation is unlikely to be introduced before next year and the Government also plans a period of transition to give companies time to adjust to the laws.

Details, Page 7

LEGAL NOTICES

THE HIGH COURT
IN THE MATTER OF:

ANGLO IRISH BANK
CORPORATION PLC

AND IN THE MATTER OF:

THE COMPANIES ACT, 1986 -

1986

NOTICE OF PETITION

NOTICE IS HEREBY GIVEN that a Petition presented to the High Court of Ireland on the 17th day of July, 1989 for the confirmation of the cancellation of IR£4,202,850.00 of the balance standing to the credit of the above-named Company from £1,745,000.00 due to the payment of the sum of £2,457,850.00 to the Royal Bank of Scotland plc.

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TECHNOLOGY

Rubbish is perhaps the most visible brand of pollution and plastic packaging is regarded as one of the worst offenders because some forms are virtually indestructible.

This has left the makers of plastic packaging under the green searchlight when questions are asked about recycling. In response, companies in the \$15bn-a-year plastics sector have been seeking ways to ensure that their materials do not cause environmental problems after use.

Yet, whatever technology is available to assist them, the solution is often only as good as the strategy for collecting and separating reusable plastic from the other rubbish. This is why some of the initiatives by big plastics producers in the US, including Dow Chemical, Du Pont, Amoco and Mobil, are being carried out with waste disposal companies.

In Europe, the response has been slower, although several large companies, including Hoechst of West Germany, DSM of The Netherlands and Royal Dutch/Shell, the Anglo-Dutch group, are all considering an increase in their plastics reprocessing operations.

The driving force behind these moves is the threat that some of the newer and more promising markets for plastics, particularly in packaging, could be put at risk by new laws circumscribing their use on environmental grounds.

Simon de Bree, a board member at DSM, says most plastics companies will have to react to feelings of antagonism towards the over-use of plastic packaging. Another observer says: "If the industry can take the initiative by demonstrating its commitment to recycling then some of the pressure will be lifted."

Chipping away at a mountain of rubbish

Peter Marsh explains the difficulties that make plastics recycling such an uphill struggle

There is also a strong economic argument. If plastics waste can be recycled efficiently, it will create a new source of raw material. "We are not doing this recycling," says Jerry Ehrens, a Punt marketing manager. "We are confident we can make money out of it."

Packaging, for anything from snack foods to industrial equipment, is at the sharp end of the debate about recycling. It accounts for about a third of the 20m tonnes of plastics produced world-wide each year.

Most packages are in place for a short time and then discarded. With the use of packaging materials rising at 5 to 10 per cent a year in many countries, that leads to a growing mountain of plastic waste. And while by weight plastics account for only 4 per cent (12m tonnes) of western Europe's annual domestic garbage, in volume terms the proportion is around 20 per cent. Two thirds of this waste ends up in landfill sites, which are rapidly becoming scarcer.

The issue is aggravated by the fact that most plastics take an extremely long time to degrade - as is testified by the pervasiveness of the litter. But more serious in the long term is the way that buried plastic waste can act as an impermeable barrier, both to water flows and to the gases - such as inflammable methane - which build up as organic material breaks down.

Some recycling of plastics does take place, mainly in the industrial field. In the UK, 5 per cent of the 3m tonnes of plastics used each year is reprocessed, according to the British Plastics Federation.

Most of this activity involves collecting plastic scrap and used sheeting and selling it to the makers of packaging.

In the UK, some 50 companies take significant volumes of plastic from this source and use it in new packaging - from bin liners to food trays. These companies include Scott & Robertson and Polymer Technologies International, both of which are investing heavily in the washing and reheating plants needed for such operations.

But the recycling of domestic plastic waste is minimal. In Europe 4 per cent of such refuse is reprocessed, while the US figure is only 1 per cent of the 10m tonnes of plastic refuse discarded each year.

One of the main barriers to recycling plastic packages is that they are often not as simple as they look. There are five big-selling plastics, accounting for three-quarters of total world production: low and

high-density polyethylene, polyethylene, polyvinyl chloride (PVC) and polypropylene. Increasingly, these plastics are being alloyed or layered to improve flexibility, appearance and preservative properties. So even a humble food wrapper may consist of several types of material.

Recycling such products is difficult because of the need to "unscramble" the different plastics from the mix. So most recycling initiatives concentrate on specific items known to contain single plastics, for example drinks bottles made from polyethylene terephthalate (PET), a hard plastic chemically related to polyester fibre, washing-up bottles that consist of high-density polyethylene and industrial packaging incorporating low-density polyethylene film.

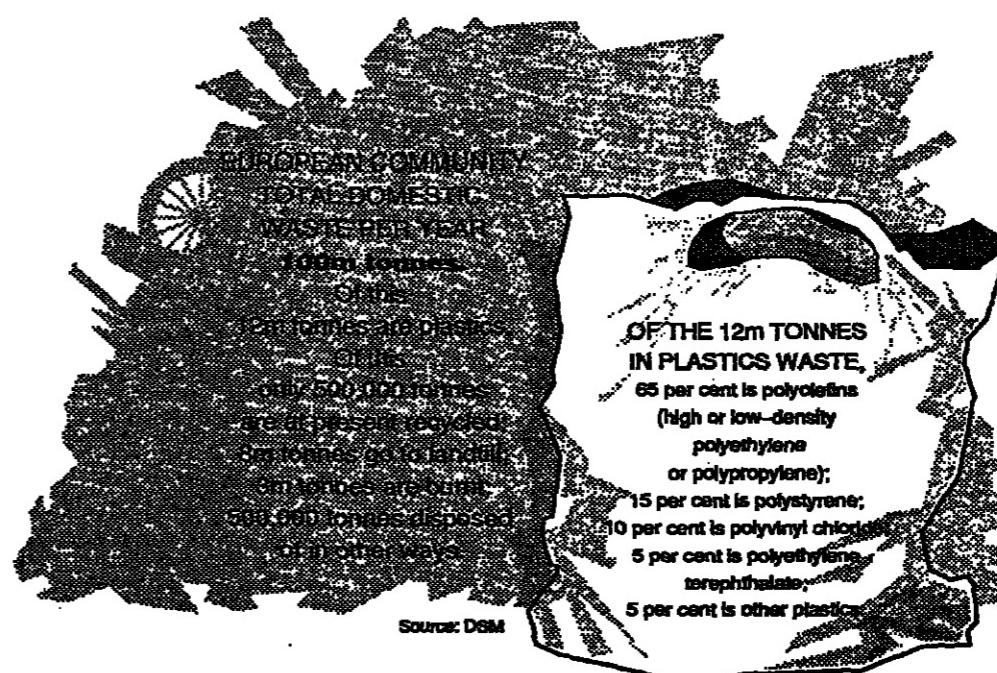
The success of recycling initiatives often depends on efficient collection. The most practical way to achieve this is to educate householders to separate plastic rubbish from other kinds of waste. This is already done on a large scale in parts of West Germany and the US. In Britain, few local authorities organise rubbish collection on this basis, although Sheffield is pioneering a project that encourages householders to sort out rubbish so that the potential for recycling is optimised.

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Source: DSW

OF THE 12M TONNES
IN PLASTICS WASTE,
65 per cent is polyethylene
(high or low-density
polyethylene
or polypropylene);
15 per cent is polystyrene;
0 per cent is polyvinyl chloride;
5 per cent is polyethylene
terephthalate;
5 per cent is other plastic.

Direct line to data from parliament

A DIAL-UP index of UK parliamentary proceedings, including select committee reports and European Commission publications, is now available to the public.

Polis (the parliamentary on-line information system) can be reached by direct dialling or at local call rates via British Telecom's Packet Switched System.

The new public service is an extension of a system run by Meridian Systems Management (MSM), which is already available at the Houses of Parliament. About 40 terminals there are connected to the system via two British Telecom Kilostream lines. MSM also staffs a support line at its office in Bromley, Kent.

There are three databases, one for each of the last three terms of government. Between them they contain half a million records occupying four gigabytes of on-line storage. The latest database is growing at a rate of 100,000 records a year. Because Polis is an index rather than a transcript of proceedings, response times are fast: 90 per cent of inquiries are satisfied within 5 seconds.

The system is updated after every parliamentary sitting. Index entries typically contain the Hansard date, volume and column reference, the names of the Government departments and MPs concerned, an index key assigned by the Commons Library and a brief description.

The user can search the index either by entering a short generic key to pick up all entries for a given subject, or by creating a composite key to select references to a specific MP between certain dates.

Data are retrieved in reverse order to give the most recent record first. The databases have a built-in thesaurus of synonyms: a search relating to the community charge, for example, will automatically include any references to the poll tax.

At present, many companies rely on personal contacts for information, but Polis should offer a more reliable and complete source of business-related legislation.

Andrew Cowie

New weather prediction technologies are expected to provide a life-saving flood warning system for poor countries, such as Bangladesh, which cannot afford to build giant sea defences.

A computer modelling scheme, intended to protect large populations in low-lying regions from rising sea levels, has been pioneered by Britain's Natural Environment Research Council (NERC). Very long range weather prediction should also benefit navigation, commodity trading, agriculture and construction.

According to a World Bank discussion paper, "Advance Information on seasonal climate fluctuations will make planning for the distribution of fertiliser for food relief more efficient. Construction projects could be timed to avoid flooding."

Computer modelling could have saved perhaps 10,000 lives last year when the worst cyclone in the history of Bangladesh swept across the low-lying southern part of the country. One of the world's poorest and most densely populated nations, it had been hit just three months earlier by flooding caused by rainfall. Climatic changes due to the greenhouse effect could increase the frequency of such disasters.

Traditionally flood problems have been dealt with by massive expensive dams. Improved weather forecasting, flood risk analysis and mapping offer an alternative because the early warning would enable such

measures as evacuation.

Roger Flather, of the NERC's Proudman Oceanographic Laboratory, explains: "Coastal floods produced by tropical cyclones in the Bay of Bengal constitute one of the greatest natural hazards. The only practical means of saving life is to develop computer models capable of simulating and predicting the water movements and associated sea level changes in the region, backed by effective local warnings."

Four years ago, after coastal floods had killed more than 11,000 people in the Bay of Bengal area, Flather formulated proposals for collecting data for a model. An NERC research ship would work with the Bangladesh Inland Water Transport Authority and the Canadian Department of Fisheries and Oceans.

His proposals may be reconsidered shortly under a global disaster management programme and a study of sea levels, which have been launched by the London-based Commonwealth Secretariat. These programmes coincide with preparations for the International Decade for Natural Disaster Reduction in the 1990s. "Our aim has been to encourage the collection of all information relating to surge events," says Flather. Meteorological information derived from weather radar systems

and satellite images would be used with the surge models to give accurate flood predictions."

Accurate, global, long-range weather prediction has been made possible by computer modelling of El Niño - a change in the atmospheric circulation pattern which occurs at irregular intervals of up to eight years. The present Niño is blamed for floods both in Bangladesh and the Sudan. The same phenomenon is responsible for such disasters as the recurring monsoon failures in South-East Asia and floods in Central and South America.

The 1982-83 Niño wiped out crops and ravaged the western seaboard of the Americas by persistent storms, destroying much of the anchovy harvest. In Australia, the associated southern oscillation led to severe drought, furious bush fires and dust storms which carried away 200,000 tonnes of topsoil.

NERC computer scientists and colleagues in the affected Commonwealth countries may soon be able to predict El Niños. As a result, says the World Bank, specialists can be expected "to provide at least a few months' advance notice of increased risk of climate-related disasters, such as a poor south-west monsoon in India, drought in East Africa, Indonesia or the Brazilian Amazon, or serious flooding in Peru, Ecuador or Bangladesh."

Thomas Land

Weather forecasting takes on a life-saving role

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Do you have a Technology Marketing Strategy?

This country spends an immense amount of time reminding the world how inventive and creative it is but at the same time is really apologetic, very sorry, we are not really good at marketing ourselves."

This amazing nonsense is usually voiced by those involved in the invention process, or the engineering cycle of product development, who prefer to ignore the market need and create in a vacuum!

Likewise, how many Marketing Directors in industry control the technology marketing process, including patenting and product licensing - that's somebody else's responsibility in another part of the company!

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MANAGEMENT

Hindustan Lever

Flexing its competitive muscles

Having been constrained for many years by the country's trading restrictions, one of India's largest multinationals now plans to take full advantage of increasing deregulation. David Housego reports

When Ashok Ganguly takes a look at the prospects for foreign multinationals in India he likes what he sees.

Ganguly is the chairman of Hindustan Lever (HL), the Unilever subsidiary based in Bombay, which is the country's largest foreign multinational with interests in soaps, detergents, chemicals, toilet goods and agricultural products. Add in Unilever's other subsidiaries in India - including Lipton, Brooke Bond and Ponds, with which HL has various management, research and marketing tie-ups, and you have total sales of more than Rs20bn (£770m). In terms of turnover, that puts Unilever on a footing with India's largest domestic groups.

In the past, HL felt that its growth was impeded by the Indian Government's licensing restrictions on the expansion of all large companies, and by the need to trim its strategy to comply with the FERA rules (Foreign Exchange Regulation Act) on Indian subsidiaries of foreign companies.

But with deregulation increasing, the purchasing power of the middle class (defined as the top 250m people) growing at 2 to 7 per cent a year in real terms, and a rising demand for quality consumer products, "the opportunities are now manifold," says Keki Dadiseth, the finance director.

HL is in a good position to take advantage of them. Over 65 per cent of its Rs10.7bn per cent turnover is in soaps and detergents. According to Shom Sen, vice president for marketing, demand for these products is expanding at between 6 and 8 per cent a year, or three or four times faster than the growth in population. Demand for personal products (toothpaste, shampoos, creams) and for specialty chemicals is growing faster still.

Says a senior executive: "We have done very well in a protected environment. We will do much better in a competitive one." Over the past five years HL's return on equity has

grown from 16.4 per cent to 23.7 per cent.

A low profile, conservative group, HL has long shunned publicity and safeguarded its position in India by keeping its sights firmly fixed on the long-term horizon. It faced a difficult test in the early 1970s when the Indian Government brought in the FERA laws requiring foreign companies to bring their shareholding in Indian subsidiaries down, normally to 40 per cent. HL was 85 per cent owned by Unilever.

While companies like IBM left India rather than comply and others fell in with the 40 per cent requirement, HL fought for 10 years to maintain an Unilever stake of 51 per cent.

The arguments of its Indian management - which events have since justified - were that HL would gain in terms of access to technology, career openings for managers and the international experience that comes from being part of a global group, with Unilever holding a 51 per cent stake.

At the time the price for Unilever retaining control seemed heavy. HL had to agree that 60 per cent of its business would be in what was called the "core" or priority sector and 10 per cent in exports.

Ganguly always maintained that the necessary restructuring suited HL's strategy. He sold the edible fats, dairy and animal feeds activities to Lipton, another Unilever subsidiary, thus transforming what was a one product and too narrowly based tea concern into a broadly based food processing company. HL also expanded laterally into chemicals and agricultural products (fertilisers, plant feeds and hybrid seeds), enabling HL to gain a foothold in rural India. Within

18 months it had regained the 25 per cent of turnover lost in the sale to Lipton.

More difficult was the challenge it had to face in the early 1980s when a new low-cost producer began making deep inroads into the detergent market. HL was overwhelmed by a market leader with a high priced, quality product in Surf.

The success of Nirma, producing out of backyard workshops, was to develop a low cost detergent to replace the washing soap traditionally used in India - and at a price far lower not only than Surf but traditional laundry soap also.

Nirma's lightning expansion

led to an explosion in demand for detergents. Surf's sales

grew more rapidly - rising from an annual 5 per cent growth to 15 per cent on the back of this. But HL had no brand with which to compete in the dramatically expanding lower end of the market.

Ganguly argues that HL's hands were tied because it was unable to obtain the licences to build additional capacity and thus it was best to concentrate on the upper end of the market where value-added was greatest.

Ingenuity and deregulation eventually came to HL's assistance. New detergent makers

which sprang into existence on the back of Nirma's success went bankrupt because they lacked the distribution back-up. HL began taking over these units on a leasing basis

- thus adding capacity for detergents of similar quality to Surf in both powder and bar form at no cost, and earning good marks with the authorities for preserving jobs.

HL has leased three detergent and soap plants which it

is now running at full capacity and taken a 51 per cent stake in one, Stepan Chemicals in the Punjab, purchased at an almost nominal price. Summing up HL's leading experience, Dadiseth says: "If you can milk a cow without buying it, you should not buy it."

Deregulation since 1985 has allowed the group to build additional capacity as well. By 1986, HL felt ready to take on Nirma in the lower segment of the detergent market. It developed a new product, Wheel, from local raw materials, claiming it was better and gentler than Nirma. Wheel was launched with a massive advertising campaign and at the same price as Nirma in 1987/88.

Sales are now running at the level of 100,000 tonnes a year according to Sen and will rise to 250,000 next year. By then, HL hopes to have regained a third of the market in detergent powders and bars in volume terms (up from 20 per cent at the moment), and "will be market leaders in value" - with a 45 per cent share compared with 38 per cent.

The expansion of capacity has also helped HL towards a solution of another thorny problem. Wages had been increasing at its Bombay plant, one of the largest in the group, at 15 per cent a year. Notwithstanding Rs300m investment in modernising the factory, its productivity record was the worst of all HL's plants.

Ganguly long felt that a conflict was inevitable at Bombay, but that the management was in a weak position while there was a substantial shortage of capacity. The conflict erupted last year when strikes began in pursuit of wage demands that the company claimed would have almost tripled wage costs. HL declared a lock-out. A year ago, on June 23, the lock-out ended and workers returned.

With the prospect of increased de-licensing and changes in the FERA regulations, HL now feels that government interference will less and less stand in the way of what it wants to do. Dadiseth says: "If somebody tells me today that he cannot do something because of the law, I

interpret it more as a grudge than a reality." He argues that if you have a good case and present it well, the government will allow you to go ahead.

In this more competitive

environment, HL wants to expand through acquisitions.

As part of an overall Unilever

strategy it is seeking to

broaden the food interests of

Lipton and Brooke Bond. In

other divisions it wants as well

to pursue its policy of leasing

bankrupt units.

The launch of Wheel is a

sign that it intends to spend

more heavily on marketing.

Marketing expenditure

increased by 50 per cent in two

years from Rs120m to Rs180m.

HL is aiming over the next two

to three years to quadruple its

share of the toothpaste market

from 5 to 20 per cent.

The group is spending more

heavily on capital investment;

it has risen from an average of

Rs300m a year over the past

five years to Rs500m this year.

It has some big chemical pro-

jects in the pipeline including

a Rs2bn linear alkyl benzene

plant to provide feedstock to

its detergent business.

It is expanding its interests

in biotechnology where it sees

potentially large markets in

the accelerated development of

hybrid seeds and in organic

fertilisers. It believes that its

export business - now

accounting for 10 per cent of

turnover - could expand sub-

stantially. R. Gopalakrishnan,

export manager, forecasts a 10

to 15 per cent increase in

export volume over the next

few years, but adds that "we

are at the beginning of a ride

which could be breathtaking."

This is based on HL gaining

more of the international

contracting business in prod-

ucts like garments - long part

of its export operations - that

have traditionally gone to East

Asia.

Profit growth last year was

depressed by drought, higher

raw material prices and the

increase in marketing expendi-

ture. Ganguly has already

announced a substantial

improvement in profits in the

first months of this year. The

company sees this as a harbin-

ger of the good times ahead.

Management abstracts

Skills shortages and adult industrial training. A. Roberts and M. Cooke in *Industrial and Commercial Training (UK)*, Sept/Oct 28 (6 pages).

Discusses, quantifies and deplores skills shortages which restrict the application of new technology, and explains the contribution now made to open learning facilities, viz. the Open Tech, the Open College, and the Open University. The application of the first of these at Austin Rover is discussed at some length. Provides an extensive list of references (47 of them, to be precise).

New competition in the service economy. C. Grönros in *International Journal of Operations and Production Management (UK)*, Vol 8 No. 3 88 (11 pages).

Traces the increasing importance of the service sector and argues that manufacturing will increasingly need to rely on service functions to compete, because anyone can make the goods but competitive advantage will depend on the like of technical service and customer training. Believes that the key to success in modern business lies in improved service know-how, and provides five "rules" of service. These cover employee commitment to customer requirements and to marketing the firm's products at every point of customer contact, demand analysis, quality control and organisational support. Emphasises the approach is valid for both service and manufacturing sectors.

Conquering evaluation fear. M. Coyer and others in *Personnel Administrator (US)*, June 88 (7 pages).

Believes that appraisal does not contribute as much as it might do to improving performance, because of managers' emotions (nobody likes to convey bad news) and lack of skill/confidence; advocates rational effectiveness training (RET) as a means of overcoming these emotional blocks. According to RET, the troublesome emotions and poor supervisory behaviour result from baseless/exaggerated beliefs and thoughts; gives an example of RET techniques and lists benefits of RET training - identification of uncomfortable appraisal situations, recognition of ineffective actions and avoidance of procrastination.

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How to recognise an overstressed worker

By Michael Dixon

HAVE you put yourself on the back for a bit of work you've done recently? If you have, all well and good. But if not, be warned: you may be headed for trouble.

One of the first things people do when they become overstressed is to stop commanding themselves on their achievements, says Dr Victor Meyer, a behavioural psychotherapist specialising in treating the victims of such afflictions.

His talk on stress at a London seminar held by the Paycore consultancy the other day included a list of four more telltale tendencies. One is comparing yourself disadvantageously with other people. A second is fearing criticism.

"A less obvious one is fear of praise. When severely anxious people are praised for an achievement, they take it as meaning they're expected to achieve still more," Dr Meyer explained.

"Fourthly, they make self-disparaging interpretations of events. Even if something happens which shows that someone else approves of them, they often decide the other person must be stupid and doesn't count."

He added that there are also typical ways in which the overstressed react to their plight. The hair dozen

- 1 Withdrawing socially, making themselves less and less accessible to other folk.
- 2 Obsessively checking things again and again.
- 3 Fishing for compliments.
- 4 Doing something to make a good first impression, then running away from the situation.
- 5 Being flippant, treating everything as a joke.
- 6 Being aggressive, not just purposefully as a means of getting something they may need help. Otherwise, forget it."

The trouble with such lists of symptoms is that they are apt to set perfectly healthy people thinking they have them. So Dr Meyer offered a further diagnostic aid. "Even if you suspect you have the whole darned lot, the acid test is whether it really worries you. If so, you may need help. Otherwise, forget it."

He added that, provided sufferers recognise they have a problem before it becomes severe, they can often cope with it themselves by a method called "flooding". At the end of his war service as a fighter pilot, for example, combat flying became so stressful to him that he developed a stomach ulcer.

"When I found he was a gourmet, it wasn't hard to prescribe the treatment," the doctor said. "We called in some first-class caterers in the evening and made him a superb dinner; everything he wanted just as he wanted it. The price of the meal to him was that he had to eat it going up and down in his office's lift - which he did."

"We then repeated the process on later evenings, each time arranging for the

meal to be just a little less enticing than on the previous occasion. But well before it got down to a company canteen standard, his phobia of lifts had disappeared."

But even if the problem has reached a stage where professional help is needed, the treatment can have its pleasant aspects. For instance, not long ago Dr Meyer was called in by a senior executive whose overstressed state had developed into a terror of using lifts, including the one to his office on the top floor of a high building.

"When I found he was a gourmet, it wasn't hard to prescribe the treatment," the doctor said. "We called in some first-class caterers in the evening and made him a superb dinner; everything he wanted just as he wanted it. The price of the meal to him was that he had to eat it going up and down in his office's lift - which he did."

"We then repeated the process on later evenings, each time arranging for the

imperial's management systems, and still more importantly at its assets, with the aim of making the best of the college's income-generating opportunities.

The assets include not only 16 acres of Greater London but some 200 acres near Ascot. So experience of property development is seen as essential. But since strong financial and organisational skills are also needed, the headhunter says the most suitable candidates would be senior general managers whose responsibilities have included property holdings.

In view of the probable salary - although no figure is quoted, I doubt that it can be more than about £50,000 - will be the first managing director to be employed by a British university institution.

The opening, at London University's Imperial College of Science and Technology, has arisen from two main circumstances. One is the Government's demand that universities cover a growing share of their costs by their own money-making efforts.

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As the need to earn cash has changed Mr Smith's job greatly, it is being re-named "managing director". But lest that be considered too shameless a concession to commercialism, the newcomer will still report to the "revered" Professor Eric Ash.

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JULY 1989

ARTS

Opera al fresco

VERSAILLES

Open-air opera in tourist beauty-spots is the latest vogue of this now most fashionable and "sexy" of the performing arts. Edward Mirvish, the expatriate-born, Viennese-based businessman and travel agent who mounted *Aida* at Luxor, was thereafter invited by the French Government to mastermind a similar project — an "International Festival" (15-30 July) — to form part of the Bicentenary celebrations.

The chosen site was not, of course, the Théâtre Gabriel, the Sun King's exquisite jewel of a small opera house, where many of Lully's operas were first given and it was not the grand courtyard entrance to the palace, which might have provided an acoustically feasible enclosing space for large-scale opera — permission was evidently refused for reasons of monument preservation. Instead, Mirvish and his associates placed their stage in the Place d'eau Suisse, the large reservoir to the left side of the

Three grandstands near the water's edge hold the audience, and amplification is needed to transport the music across the interposing spaces. The chosen operas are *Andrea Chénier*, conducted by Anton Giuliano, and *La Traviata*, conducted by Julius Rudel; prices start at \$3,000 Firs, with a supplement for the opening-night *Chénier* with Plácido Domingo. Refreshments tents (catering by Lenôtre) are dotted about on the fringes, with prices to match the those of the tickets general level (a Coke costs 30 francs); evening dress is de rigueur; and package-parties from Germany

and Britain are making up a substantial section of the audience.

Expedition of the first two evenings has not been happy. Forging a connection between lyric theatre and an attractive outdoor setting with historical overtones is an artistic act at best improbable, and, I fear, basically phoney. Here it was rendered absurdly tenuous by the neediness of the amputation process (bands of speakers above the stage reducing voices and instruments to the dimmed monochromes of the oddest vagaries of balance caused by passing relationships with bodyguards). Notes from the nearby main road and railway line, not to mention the light aircraft that dogged much of the *Traviata* first half, was an intermittent minor irritation.

And the gaudy, perhaps even vulgar, spectacle that might have provided a small token of compensation was simply absent. The two operas shared basic sets — reversible house facades differently decorated — built by the Opéra de Wallonie (which also provided the mediorchestra and chorus). Both operas unfolded thereupon with decent speed and efficiency; but, except for a torchlight parade of condemned prisoners in a cart drawn across the full length of the stage and then off into the distance, an effect that brightened Act 2 of *Chénier* without having very much to do with it, these were inert bargain-basement stagings — unimaginative, cheap-looking, essentially opera-house-bound. The gamine exploration of site and

Max Loppert



Alexej Merkushov

Derevo

ICA THEATRE

Leningrad-based Derevo, founded in 1985 by Anton Adesinsky, are the sort of experimental company that prefer words like people, awareness and existence to actor, acting and theatre. Their work is vivid and at times rampantly self-indulgent, but every time one feels ready to write them off they produce an image that simply cannot be ignored. Their theme is the creation myth in its varying permutations, which they rehearse with an imagery clearly influenced by pop sci-fi movies, from *The Man Who Fell to Earth* to *2001 Space Odyssey*.

They begin their LIFT appearance with a procession through the packed foyer of a writhing accordionist and a bald powdered figure, reminiscent of one of Lindsay Kemp's creations. It continues with a line-up of bad circus performers.

Candles and chimes set in train a religious symbolism which seems to develop from Catholicism to Buddhism; then all of a sudden the bawdy humour is back with the rupture of a huge scrotal conglom-

erate of balloons spouting the stage with an unseaworthy vomit-like liquid and giving form to a female figure, still draped in a dripping cauldron.

One is tempted to say one has seen it all before, and yet there is a stately beauty to some of the images that keeps the impetus going through the overlong inter-scene hiatuses and the front-of-stage episodes which, thanks to the spelling-out of the overkill ICA, can't be seen at all by anyone beyond the front row. The mimework is often hypnotically skilful, while the final post-apocalyptic shadow play of two diminishing, embryonic figures gently pushing a skeletal gate to and fro, sends one out into the night realising that it has all, after all, been worth while.

Claire Armitstead

ARTS GUIDE

THEATRE

London

The Merchant of Venice (Prince). David McAllister's Shylock a sympathetic, semaphoric shunning alien in Peter Hall's fine Venetian Renaissance production, Geraldine James a superb Portia (885 223).

Much Ado About Nothing (Strand). Alan Bates and Felicity Kendal lead strong ad hoc company through turntightly rewrites with Chekhov's sexy, sanguine Ivanov. Not to be despised (885 201-202).

One Day in the Country (Garrick). Brilliant National Theatre version of Jocima Scholz's Israeli play about the last days of the Vilna ghetto and its resident theatre company. Moving and shocking. Nicholas Hytner directs. Bob Crowley designs good music arranged by Jeremy Samms. July 20-25 (929 223).

London International Festival of Theatre. LIFT, the fifth biennial festival takes place all over London during July. Recommended highlights are the Abbey Theatre of Dublin in Tom Murphy's *A Whistle in the Dark* at the Royal Court (730 1745) all month, the Károly József Theatre of Budapest in Chekhov and Gogol at the Old Vic (829 709) until July 21, and the Comédie Genevoise in Switzerland's *Macbeth* at the Lyric Hammersmith (741 220) in the last week only. More details on 340 2423.

Anything Goes (Prince Edward). Cole Porter's silly ocean-going musical has four or five marvellous songs and Elton Paige failing to emulate Ethel Merman. Jerry Zaks' desper-

ately bright production comes from the Lincoln Center in New York. (734 8851, or 885 2420). *The Voysey Inheritance* (Cottesloe). Dulwich National Theatre production by Richard Eyre of Granville Barker's classic, mostly contemporary rewriting of an Edwardian family and their houses. Insider trading, speculation with client's funds, moral purges and materialistic philistine all render the Voysey clan a very familiar crowd. (828 2220). *Stage Fright* (Queen's). The high-spirited *Queen's* is a bit of a mill in a surreal confection between Prunella Scales as Her Majesty the Queen and Bennett himself as Anthony Blunt in the royal picture gallery. Clive Francis plays Guy Burgess in a refresh of Bennett's fine TV film *An Englishman Abroad* (724 2220).

M. Butterfly (Shaftesbury). Anthony Hopkins as the tortured diplomatic hero in a Peter Shaffer-style "spectacle of ideas" dressed up in John Dexter's superb production as a metaphor of homoerotic life. The transvestite tragedy proves less effective than in New York. (828 3338).

London International Festival of Theatre. LIFT, the fifth biennial festival takes place all over London during July. Recommended highlights are the Abbey Theatre of Dublin in Tom Murphy's *A Whistle in the Dark* at the Royal Court (730 1745) all month, the Károly József Theatre of Budapest in Chekhov and Gogol at the Old Vic (829 709) until July 21, and the Comédie Geneve-

ise in *Pygmalion*, this is an classic with forgettable songs and dated leadenness in a stage full of Northern English edges that retain an authentic touch. Jerome Robbins' Broadway (Imperial). Anyone attracted by the notion of a three hours of Alvin Ailey's流水行雲 production of Robbins' directed and choreographed plays of the past 40 years, including *On the Town*, *West Side Story* and *Gypsy*. The latter of the credits is dimmed by the brevity of the piece with a combination of Broadway aspirants who lack the multi-talents that inspired the heyday of the musical.

Summer (Broadhurst). Neil Simon's latest comedy is a self-conscious farce with numerous slumbering doors and lots of zooming out doors as it bites. Christine Baranski leads an excellent cast in the inevitable but disquieting hit.

Cats (Winter Garden). Still a sell-out, Trevor Nunn's production of T.S. Eliot's children's poetry set to music is visually startling and choreographically prime. (229 0220).

A Christmas Night (Dolceotta). Jeff Goldblum heads the cast in the first outdoor performance in Central Park that begins the New York Shakespeare Festival's nearly 50th year of culture by moonlight. Director Harold Green has elegantly set the comedy in designer John Lee Beatty's version of turn-of-the-century Monaco. 1st Stree entrance on the west side. Ends July 21.

Land Me a Tenor (Royale). A sprucing up in the set of a decaying town's big time opera ambitions makes a transatlantic hit of this farce, first produced in London, but now with a local cast led by Philip Bosco and Victoria Williams. (229 0220).

Shaker Valses (Broth). Penelope Collinge brings her West End triumph to Broadway in Willy Russell's amusing and touching story of a Liverpool woman's

TELEVISION

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But with *Cagney And Lacey* it was not a question of the human relationship enhancing our understanding of the plot; they actually acquired equal importance. The macho types that we had followed for so many years in *M Squad* and *Baretta*, and which had been held up to us as heroes, suddenly became villains now that feminism had entered the frame.

With *Moonlighting* we reached a point where entire episodes could be taken up with the state of the relationship between Maddie and David, while the plot, if it existed at all, was pushed well into the background. Moreover *Moonlighting* brought us fantasies which did not have to be "explained" as dreams in the fashion of a Hollywood movie, but were allowed to stand in their own right. That development reached its logical conclusion in *Beauty And The Beast* which unashamedly mixed the conventions of the fairy story (a heroine being living in tunnels below New York City) with those of the normal American television drama series (an attractive woman working as a lawyer).

The changes began with such series as *Los Gatos*, *Cagney And Lacey*, *Hill Street Blues* and *Moonlighting*. In these we started to see the fey, the fantastic and the feminist. At first it was a definite improvement. Although there was a mass of plot in *Los Gatos* there was also an interest in the forces driving human relationships; an interest which has an important presence in drama from *Aschylus* to *Vaykhouna* and which was seriously under-represented in those earlier American action series.

Similarly *Hill Street Blues* was more interesting than *Kojak* because we could see not only what the police did, but also why. The fact that Belker looked after his elderly mother had a bearing upon the way that he did his job (though might not quite explain why he hit people . . .) and the domestic relationship between Frank Furillo

turning them over in their hands like a set of false teeth on which they expect to discover a lurking tomato pit. If the models for the early action series were writers such as Raymond Chandler and Zane Grey, the models for this new set appear to be Iris Murdoch and Margaret Drabble.

Likes delivered in American drama series shown in Britain during the past couple of weeks have included:

" Didn't they tell you that socialisation begins at day care?" (from *thirtysomething*.)

"First you have to find somebody you like, then there's 'Is he threatened by your job?'" (*Leg Work*) and

"I had a frighteningly clear vision of myself ten, fifteen years from now, my ailments might not be quite so psychosomatic, and if the 35 years between us seems troublesome now, believe me ten years from now you'll hate me for it." (*LA Law*).

We seem to have moved an awfully long way from "Get 'em up, move 'em out" though in most cases the settings are anything but unfamiliar. *LA Law* for instance is a legal drama in the long American tradition stretching back through *Perry Mason* and *The Defenders*, but now we spend the bulk of the time not in the court room but in the offices of the law company where the lawyers have conversations such as

" Maybe this will be a good time to

clear the air, soda speak."

" What about?"

" About this whole kinda tripartite sub stratum that exists among the three of us: Roxanne's attitude to you, me and Rox, you and me . . ."

Leg Work is a private detective series. However, the detective is not a middle aged man in a trilby but a pretty young woman in a Porsche. Her client this week was not a blackmailing adulterer but a young homosexual dying of AIDS who wanted a previous partner found and warned.

Hooperman is a police series featuring a caring cop who works in a precinct commanded by a woman. He also employs a stunningly attractive female plumber. His chief concern this week was not jumping parapets or running up fire escapes (though he did shoot his gun at people) but persuading a colleague to leave his contract condition seen by a doctor, and tracing a runaway "juvenile" who had been beaten up by his father. Hooperman's great virtue is that he behaves like a woman.

The Bronx Zoo is a lattery *Blackboard Jungle* where recent dialogue included:

" He misses me, Mr Barnes."

" Yeah, but I can't have you breast feeding in class, and:

" So often in life you're forced to deal with things that are just beyond your emotional and spiritual resources . . ."

Paradise is the first new Western for many years, and in the central situation fugitives Ethan Coen has to look after his sister's four children. In addition to being incredibly fast on the draw, it turns out that he is also a wonderful mother.

Studio 58 has elements of *Broadway News* (the most authentic film ever set in a television studio) but the chief interest turns out to be, not the making of television programmes, but the emotional relationships of the staff. This week's episode was all about David's son Josh, David's desire to be a dad, and ex-wife Maggie getting custody.

And of course *thirtysomething* is the series which sets out deliberately to be about nothing but the emotional turmoil of its characters. Here men open conversations with lines such as "Is she ovulating yet?" and the air is thick with the word "Commitment".

This is a world which would be not just unfamiliar to *Gunslinger's* Matt Dillon or Chief Dan Matthews of *Highway Patrol*, it would be virtually incomprehensible to them; vivid proof of the social revolution which has occurred in the US in the 30 years since 1959.

And now there is another straw in the wind. In *Studio 58* last week they were talking about "whining feminists" and "male bashing"; a hint, perhaps, that in the country where change is virtually a religion, matters are about to move on yet again.

Christopher Dunkley

Alceste

COVENT GARDEN

The 1776 Paris *Alceste* of Gluck cannot quite qualify as an opera of the Revolution, though its appearance for a single performance at the Royal Opera House on Sunday, courtesy of the English Bach Festival, was as near to bicentenary celebrations as the house has come.

The EBF production is a period one on all counts. Against painted backdrops displaying palatial colonnaded interiors, the producer, Tom Hawkes, has directed his cast according to current notions as to what constitutes an authentic style. Attempts to do this in other quarters have tended to result in a lot of exaggerated flourishes that can bring a smile to the faces of the audience even during high tragedy, but on this occasion the effect was simple and dignified.

To that extent, Gluck

received better treatment than he does in most modern productions. The handling of the chorus was especially effective and with a greater proportion of dance included than usual (the dances at the end provided a genuine climax) the balance was heavily tilted towards the work's public aspects, where formality, order and elegance were to the fore.

Unfortunately, the glory of *Alceste* lies elsewhere. It is Gluck's ability to express difficult private emotions through an unadorned vocal line that raises the opera on to a higher level and, to do him full justice, the evening required solo singing of a generally higher standard than we had here. Gillian Ragon was a shallow-voiced Admetus and Neil Morris doublet the High Priest and Hercules with less than ideal elan.

The conductor was Marc Minkowski, leading his somewhat tentative players in a rather

unconvincing performance at Covent Garden to the age of Gluck, perhaps the Royal Opera will follow suit, or even go one better. There is plenty of time to make the next Mozart cycle an "authentic" one.

Richard Fairman

July 14-20

Tokyo

Kabuki. Both the matinee and evening performances at Kabuki-za (221 2120) feature the prodigious acrobatics and the heart-stopping aerial stunts and costume quick-changes have attracted a younger audience to kabuki, but also reflect its roots as a truly popular theatre. At 11am a mixed company of the short plays of *Ai-ko-ge*. Since 1982 *Sai-Tsu-Taki*, a colourful tale of inheritance and vendetta which includes a fight beneath a "real" waterfall (ends July 27). At the National Theatre (225 4111), *Nakamura* noted for its curious mixture of traditional and modern elements, has a new production of *Shiranami* (July 26-27). The performance is intended mainly for Japanese schoolchildren, so expect a boisterous audience!

Both theatres have informative English language programmes and earphone guides in English.

Les Misérables. (Imperial Theatre). Sunday-night revival (no Japanese) of the smash hit of Andrew Lloyd Webber's *Les Misérables* (229 0220).

The Phantom of the Opera. (Nisai Theatre). Excellent production (in Japanese) is a carbon copy of the London original.

Academy of Arts, Berlin. Das *Tribalische Ballet*. Reconstruction of one of the most famous examples of Weimar culture. Sogatz Hall (Tues, Wed, Thurs) (407 8245). *Sonata Versilia* and *Concord*. Modern dance company from New York. Spiral Hall, Olympia-Saal (Tues, Wed, Thurs) (405 5559).

Artur Pizarro

WIGMORE HALL

Portuguese-born but now a pupil of Sequeira Costa in the US, Pizarro made his London debut on Monday as the winner of the 1987 Vlado da Motta Piano Competition. The prize is a prestigious one, and Pizarro proved to be an able, technically immaculate performer, who ultimately projected a rather more distinctive personality than the earlier stages of his recital had promised. Though he had clearly planned the works — a chronological sequence from Mozart to Albeniz — to demonstrate his capabilities across a wide spectrum, his playing became markedly more impressive when the 30th century was reached.

His Mozart (the C minor Sonata K457, given as the partnering Fantasy) provided evidence of crisp articulation, a bright well-focused sound, but little natural expressiveness; rubato was self-conscious, dynamics restricted. And though the control of Beethoven's *Les Adieux* Sonata was equally complete, it conveyed little else than severe good manners; any natural musicianship that Pizarro possessed appeared to have been suppressed by his fastidious schooling.

FINANCIAL TIMES

NUMBER ONE SOUTHWARK BRIDGE, LONDON SE1 9HL
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Wednesday July 19 1989

Priorities for the Tories

BRITAIN'S Prime Minister is considering a reshuffle of her Cabinet. Whether a reshuffle will do enough to improve the Government's popularity is open to doubt. It is true that some ministers are good at persuading people to accept the Government's policies, while others are not. Mr Kenneth Baker has done more to change the structure of state education than any of his post-1945 predecessors and has sold his reform effectively. On the other hand the Environment Secretary, Mr Nicholas Ridley, has failed to convince the public that he is a true friend of the earth. Changing Mr Ridley may initially improve the Government's green image on television, but it is its policies that will tell.

Mrs Thatcher's achievements since she arrived at No 10 Downing Street in 1979 are widely recognised. She tackled public spending, inflation, and trade union power. The privatisation programme has, on balance, been beneficial. Business has been revitalised.

Yet something has gone wrong, the main thing no doubt being the economy. But when the economy is going wrong, other mistakes become more obvious. Mrs Thatcher's vociferous nationalism, of the kind expressed in the recent European elections, is as out-of-date as the corporate state politics of the 1970s. The poll-tax is both a mistake and a potential vote-loser. The reform of the National Health Service has been hastily conceived and badly handled, as is true of the privatisations of water and electricity. Though the green paper on legal reform had the merit of tackling lawyers' restrictive practices, the question today is whether the Government is sticking to its guns.

Tackling inflation

Tackling inflation remains the overriding priority. The current policy of the Government is on the right lines, but its effects are likely to be slow in coming. A long period of stagnation is the most likely prospect.

This being so, it becomes still more important that the details of structural reforms be more carefully considered than

in the recent past. For example, the role of nuclear power in the privatisation of electricity needs to be changed. Equally, the health service reforms should be introduced more carefully, preferably on a pilot basis.

The current rash of public sector strikes is a consequence of both the increased rate of inflation and the reduced rate of unemployment, but this calls into question the belief that the trade union legislation of earlier years is an adequate formula for the maintenance of industrial peace. The power of unions in monopoly public services needs particularly careful attention. More generally, the linked issues of education, training and the labour market remain the highest priorities. A lot more money is going to have to be spent in these areas, most of it coming from the Government.

Public transport

More money will have to be spent elsewhere, too. Public transport is one example, though here there is an entirely legitimate question concerning the proper balance between public expenditure and charges on the consumer. In general, however, the objective of lowering the share of public expenditure in gross domestic product should not override a more nuanced consideration of the proper funding of essential public services.

The value of a reshuffle, even a restructuring of government departments, is hugely exaggerated. What matters far more is successful policies. First, the Government will have to stick with its present macroeconomic strategy, hoping to bring out inflation, while avoiding too severe a recession; secondly, it will have to argue its automatic hostility to large public expenditure increases where they are now obviously needed; finally, it needs to focus its efforts at reform where they are essential for the improvement of the economy or such fundamental aspects of life as the environment. If the Government does not succeed in these respects, it may find its lease on power of all too short a date.

Miners for perestroika

IT IS HARD to remember, as pit strikes flare across the Soviet Union, that Communism has tended to appeal to miners. Its egalitarian and fraternal ideals chime with their felt experiences; and the manifest evils of capitalist mining breed in them a distrust of private property and its rights. Further, as readers of Zola's Germinal or listeners to Mr Arthur Scargill will have learned, their politics are shot through with a utopianism which could be captured by the transnational promises of communism.

That tradition has been weakened in the West. Many of the great west European industries, like the Belgian and the French, are closed or near to it. The West German mines are manned very largely by guest workers. The British miners were on the receiving end of Mrs Thatcher's second most successful campaign. In each case, governments of the right or the inside left have drawn a sign of relief that these hard, awkward, dreamy men have disappeared or been cut to size.

Proletarian kudos

It is in the socialist countries, however, where their class consciousness has been institutionalised and where they have remained a force. They enjoy shorter hours, earlier retirement, and better pay than most other groups. When they demand pay rises or managerial changes – as they have in many eastern European countries in recent months – they usually get them. This is not just because of their proletarian kudos; it is much more because of the vast leverage they can exercise on national economic life, producing their nations' power, foodstock and an important – sometimes the most important – hard currency export.

Soviet miners have had good cause for complaint. First, as for everyone else in the Soviet Union and especially in the outlying regions of the Russian Federation, supplies have been bad and getting worse. Secondly, they have not been allowed to become "masters of their pits," though they had been promised they would be: the pits formally went over to financial autonomy on January 1 this year, but nothing has changed, nor, with negligible exceptions, have groups of

miners been able to lease pits or sections of them to work for themselves.

A Radio Moscow report two weeks before the strike wave said that in the Doubs pits "the problem is that many collectives are demanding to be allowed to go over to leasing but their managers are unable to guarantee essential supplies of wood, metal and spare parts..."

Classic precondition

This expectation aroused but unsatisfied, is the classic precondition for revolt. It appears a mixed thing, part demand for more devolution of power, and to Communist Party interference but also big pay rises and better supplies. It has spread in recent days, from Kuzbas in Siberia to Donbas in the Ukraine. It has been supported both by the central press and by the Central Council of Trade Unions – presumably so that it may be co-opted into a less threatening perspective of "perestroika from below".

It may, indeed, lend itself to that interpretation. Demands for greater autonomy in the face of sluggish management may not be wholly welcome to the reformers in Moscow.

But to turn the demonstrations to good account means, first, ensuring that reforms are made, and that the demands for self-management and a devolution of financial control are met. More importantly, it means telling the miners of the Soviet Union, and beyond them, of eastern Europe, that the managerial and political reforms they want are incompatible with their economic demands – or rather, it is only through successfully decentralised and self-managed pits that a better living standard for themselves and their fellow countrymen can be secured.

Left-wing Welsh miners proposed something like this before the First World War. Soviet miners could do worse than get a samizdat copy of The Miners' Next Step.

Change of any kind will not come through allowing the miners to retain their status as communist society's most fearful pressure group. Sooner or later, Mr Gorbachev and his fellow reformers will have to take them on – by setting them free.



Nestor Rapanelli

Gary Mead reports on President Menem's attempts to dig Argentina out of bankruptcy

Struggling to keep every ball in the air



Carlos Menem

of petrol, gas, electricity, and transport, among others.

But that move is only the first necessary step, caused by the virtually complete collapse of the state sector; in May government expenditures exceeded revenues by more than 70 per cent. Mr Rapanelli must not only consolidate that effort, he must also steel himself for the complaints that will greet the longer-term component of President Menem's programme, privatisation.

Mr Roberto Dromi, Minister of Public Works, has the daunting task of masterminding the sale of all state-owned enterprises, which currently lose \$3.2bn annually – over \$8.5m a day. The losses, underwritten by the treasury, have convinced President Menem's government that the only option is to sell as many companies as quickly as possible.

While Mr Dromi's plan – one of the first to be announced – will no doubt gain congressional approval it will meet dogged opposition from both business and trade unions. The government has said that privatisation of telecommunications, shipping, gas and electricity – some of the largest loss-makers – will not mean unemployment. The 2m people employed in the public sector will do their best to make sure that is true. But a major part of the public sector's problem is over-manning.

Privatisation is not unalloyed good news for business. Many of the large "price-forming" companies depend almost entirely on government contracts, which last year cost the state an unnecessary \$2bn in over-pricing for goods and services, according to Public Works Minister.

Like two boxers slugging it out, unions and business in Argentina have a healthy distaste for one another but hate interference by the referee even more. President Menem has to force both to obey rules imposed by a state now urgently interested in efficiency.

At the same time Argentina has built up over \$5bn in arrears on its \$60bn foreign debt, and there is no immediate prospect of talks with its creditors to restructure these borrowings. Industry is suffering a sharp recession, with unemployment and lay-offs now commonplace. According to government figures more than 3m people are now living below the poverty line in the Buenos Aires conurbation – 44 per cent of its population.

Ironically Mr Menem is introducing a stabilisation scheme promoted by his only real rival for the presidency, Mr Eduardo Angeloz of the Radical Party. Mr Menem was victorious because he managed to persuade the electorate that the Angeloz approach was exaggeratedly severe. But since taking office the government has come to believe that it has weeks rather than months in which to act to prevent a serious deterioration of public order.

A further promise from President Menem's team is a revision of the country's tax laws. Independent estimates suggest that only 30,000 individuals pay income tax out of a population of 32 million – partly because of the belief that paying taxes means subsidising government inefficiency

and corruption. The tax reforms promise a universal 10 per cent value added tax and tighter, simpler rules forcing income tax payments of 20 per cent.

The apparent contradiction at the heart of President Menem's privatisation programme – how can a Peronist demolish what Gen Peron himself built up? – is easily understood once it is accepted that Peronism is merely pragmatism elevated to the status of a creed. Once it suited this populist movement to have all important industry in state hands. Now it does not.

If there are doubts about President Menem's plans they focus on the individual himself. Is he being pragmatic or merely opportunist? Will he eventually cave in to the forces of entrenched corruption which have traditionally opposed opening up Argentina's economy to foreign and domestic competition? And if he is going to eliminate *amigosismo*, the Latin American version of the old-boy network, why do so many of his team owe their places to being *amigos* of the President or his friends?

Under the surface of the new Peronist pragmatism, which local pundits are already dubbing "Menemstroika",

is an attempt to close a number of painful chapters in recent Argentine history.

In his first week in office President Menem pronounced himself ready to end the formal state of hostilities with Britain, which has endured since the invasion of the Falkland Islands in April 1982. Military chiefs of staff were replaced, prior to the expected general amnesty for those who were involved in excesses during the 1970s "dirty war" against left-wing guerrillas. Two days after saying that he was prepared to end formal hostilities with Britain, however, President Menem played the issue down, saying that "no formal proposal" had been made and that his statement was an expression of his wishes.

Perhaps the most difficult problem facing the new government concerns the likely attitude of those members of the army associated with Col Mohammed Ali Seineldin, who staged a four-day rebellion at the beginning of December 1988. Col Seineldin is a veteran of the Falklands War, and regards himself as a staunch Argentine nationalist. He opposes the least indication of what his supporters term the "social-democratic" inclinations of Radical Party politicians and the "Renewal" wing of the Peronist party. "Renewal" Peronists, who opposed Mr Menem's presidential candidacy, have been kept out of the cabinet, and in the past, the Colonels and the President are known to have had

Currently under detention for his rebellion, Col Seineldin has become the *de facto* head of what is now openly referred to as the "National Army". His rebellion – like two earlier led by Lt Col Aldo Rico – was staged to demand an amnesty for those military personnel accused of human "rights" abuses during the "dirty war", when some 9,000 people disappeared; a similar pardon for almost 450 officers cashiered for their part in the three insurrections; and what the rebels describe as a "revindication" of the army's role in society. This last demand is code language for a pat on the back for having fought the Falklands War, and for having (as the rebels see it) destroyed a communist threat during the "dirty war".

But beneath these demands lurks a nationalism now increasingly out of tune with President Menem's pragmatic openness towards befriending all and other nations. Not the least of Col Seineldin's antagonisms is

the threat from unions that they will refuse to take further punishment. The threat from Col Seineldin is that he may use his influence within the army to dissuade it from acting against social disorder, should it break out again. Looting and riots at the end of May left 14 dead and 800 wounded.

President Menem has moved fast in his first two weeks because he has little choice. Without swift cuts in state spending, inflation will continue to surge. While prices double each week, as is currently the case, trades unions will fight to protect their members. That in turn leads the private sector to doubt the wisdom of a price freeze – another step in the vicious circle. If rioting breaks out again President Menem might need army backing. For that he needs at least the silent support of Col Seineldin. With so many bulls in the air at once, it will be surprising if one does not slip.

Bavarian charmer

Much impressed by Theo Waigel, the new West German Finance Minister, in London this week.

Waigel wears two hats: one as head of the ministry, the other as the leader of the Christian Social Union (CSU) in Bavaria as the successor to the late Franz Josef Strauss. In London he was wearing mainly the latter.

Strauss is a hard act to follow: multilingual, known around the world, on visiting terms with Deng Xiaoping and almost anyone he wanted to see. Until recently Waigel was not much heard of outside Bavaria.

That did not prevent access to Margaret Thatcher, however,

to whom he is a mix of peasant and intellectual – including a willingness to tell jokes in English even though he does not speak the language all that well.

Would that some British ministers would let themselves loose in broken French or German – that's one of the reasons we need a reshuffle.

Waigel also says that it is only the German left that is interested in movement in Central Europe. Britain

claims to have told her quite rightly – and here his Finance Minister's hat must have come into it – that Britain must become a full member of the European Monetary System. According to German sources, his reply was along the lines: "I know I'm right, but I'll do it in the end."

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OBSERVER



A few more British Rail sandwiches ought to wear them down.

only 6 per cent of the cola market against 93.5 per cent for Coca-Cola. The company is still taking the long view, however. D. Wayne Calloway, the Peapack chairman and veteran of colas wars around the world, has just visited Tokyo and declared that the strategy is one of guerrilla warfare: chipping away at Coke's share of the market by going from store to store, vending machine, and Peapack will make it in the end.

He has all the Bavarian charm – a mixture of peasant and intellectual – including a willingness to tell jokes in English even though he does not speak the language all that well.

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Cola wars

After 29 years in Japan, PepsiCo, the soft drinks manufacturer, has managed to capture

he was chairman of the north American business which had lost a lot of money," he says. The following year, with his last £6,000 and a £10,000 loan from his father-in-law, he opened the first Waterstone's book shop. Much hard work later the chain had grown to 30 shops with ambitions to reach 100 as soon as possible.

However, the costs of rapid expansion have meant that Waterstone's has been losing money. This time, though, Waterstone, now 50, will not get the sack. Rather he is to head a new company formed by merging Waterstone's with Smith's Sherratt & Hughes chain. And it was Smith's idea to change its shop names to Waterstone's because it is the better brand.

Waterstone's is not revelling in the reversal of fortunes. "I suppose I could say 'yah, boo, snub,'" he said yesterday. But he has no intention of doing so. Instead he was "thrilled" that his employees and shareholders are to share in an extraordinary rise in the value of their investments.

Waterstone himself bought most of his shares at 4p and will get a minimum of 48p for them in 1992, and more if the group's profits rise fast. His 23 per cent stake will be worth nearly £10m at the minimum price; he will sell a few shares now, at a price of 35p, to give each of his six children a "small" present.

Heavy policing

A London strike story of the day. A colleague was coming to work from Putney, cycling along the banks of the Thames. He was stopped by not one, but two policemen who told him to dismount on the grounds that it was a public footpath. He was let off with a caution.

They are also telling Hungarian-style jokes. What happened to the man who jumped on the Northern Line? He died of old age.

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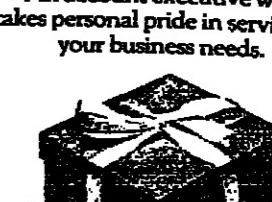
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الدبلوماسي

Scraping for sales in what has been one of the most brutally competitive markets has long characterised business for Europe's forklift truck makers. But in the past year they have been battling over something else - the components that go into their products.

"Most of the lifting masts on forklifts come from one steel maker and we are virtually fighting over supplies," says a manager of a West German lift truck manufacturer. "Demand in West Germany has gone mad. The whole of Europe has gone mad."

Demand for forklifts, and for all kinds of capital equipment that goes into factories, processing plant and warehouses, has gone through the roof in the past 18 months. Purchases of production equipment from machine tools and textile machinery to specialist plant for chemical processing, increased strongly last year and shows few signs of easing.

For some European suppliers, demand has been overwhelming. The West German machine tool industry's factories are working flat out, some with extra shifts. German suppliers are quoting an average of nine months for delivery of their machines.

Nor is it just European equipment suppliers who are enjoying what has been an almost worldwide investment boom in manufacturing kit. Domestic consumption of machine tools in Japan last year soared 56 per cent in dollar terms to \$5.7bn and Japanese machine tool builders increased production by a third as they struggled to cope.

This year, Japanese machine tool plants in Europe have accelerated purchases of locally made parts because of their inability to secure deliveries of some Japanese-made main components.

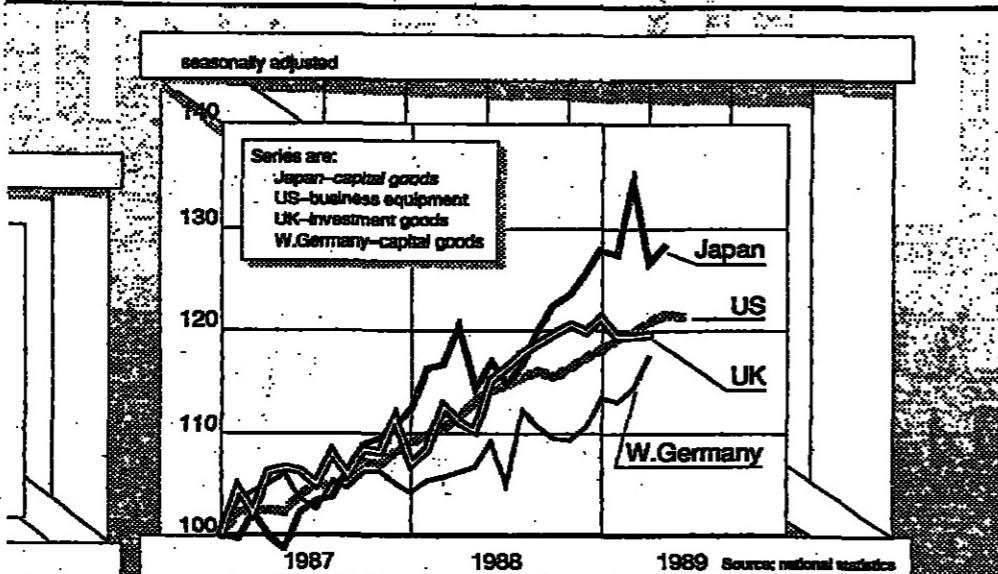
Bectel, the US turnkey processing plant contractor, says demand for non-manufacturing plant like power stations and oil platforms remains weak but that is not the story for production facilities. "For chemicals and petroleum processing, the market is strong," says Mr Denis Slavich, Bectel's chief finance officer. "In the US it is very strong and Europe is now getting stronger."

The world steel industry, which produced almost 10 per cent more steel last year and is likely to produce even more this year, says demand from machinery makers partly contributed to the industry's over-loaded blast furnaces.

Several factors have caused this surge in demand for production equipment. One is a recovery from slow investment during 1987 which was particu-

Nick Garnett reports on a prosperous year for the world's machinery and component makers

Capital equipment output



An embarrassment of orders

largely marked in Japan, West Germany and smaller economies such as the UK.

Swollen corporate balance sheets have contributed, together with some cyclical shifts in performance among

German suppliers are quoting an average of nine months for delivery of their machines

sectors which buy equipment.

Chemicals, steel and the volume car makers, for example,

are enjoying buoyant trading conditions and fat profits. On factory shopfloors, more computer-controlled production systems have been installed as a result of much greater confidence that such systems can work and because of the worldwide drive towards more flexible, lower-cost production.

The overall picture is not uniform. For every production facility that is well equipped there are probably far more that remain ill-equipped. In

two markets, the US and the UK, there are tentative signs that demand for some production equipment is starting to flag.

In some segments, increased purchases have been restricted to certain types of machines. For example, in textile machinery, there was a big jump in sales of spinning equipment last year (mainly to Asia) with sales of some types, such as short and long staple spindles, up by at least 50 per cent. But sales of weaving machinery remained static, according to the International Textile Manufacturers Federation.

Nevertheless, the Swiss textile machinery industry, the world's biggest exporter, raised exports last year by 11 per cent, measured in Swiss francs. This was the biggest increase since the post-recession boom year of 1984 and represented some stored-up demand. Exports from the Swiss industry did not increase at all in 1987 and rose by just 5 per cent in 1988.

In most sectors, the clamour for new production kit has benefited most mainstream suppliers. The once reeling lift truck

industry has enjoyed a phenomenal resurgence in demand, particularly for electric-powered lift trucks which have taken market share away from diesel and liquid gas-powered machines.

The food processors' need to supply ever wider varieties has helped to drive up sales

Sales of electric forklifts in the four main European economies, West Germany, France, Italy and the UK, rose steadily from a low point in the early 1980s to 54,500 units in 1988. It increased to 73,100 by 1989.

In the first five months of this year though, demand has leapt in two countries, with sales up a third in Italy and a quarter in West Germany. But in the UK, where demand has

come mainly from warehousing and distribution rather than factories, sales have started to fall as the retailing surge eases.

In machine tools worldwide, output rose last year by 15 per cent to \$35bn, according to American Machinist magazine. "We know this demand is hitting all kinds of machine tool makers. Demand is widespread throughout the industry," says Mr Gutmann Habig, head of economics at the West German machine tool association.

Orders from West German industry for metal cutting and forming machines this year is up so far about 90 per cent on last year. West German machine tool makers, which are major exporters, predict a rise in production this year of about a tenth, outstripping their record year of 1985. Even in a notoriously weak market like the UK, demand for machine tools rose 22 per cent in 1988.

In a few supply segments, a number of separate factors have conspired to promote equipment sales. In food making machinery, the rapid growth in the market for ready-made meals from supermarkets, the switch within dairy products to more value-added items like yogurts and fancy cheeses and the need among food processors to supply ever wider varieties of foodstuffs have helped drive up sales. "General investment levels have certainly increased but it is aimed at different markets with different requirements," says APV, the UK food and drink equipment manufacturers.

In the European chemical industry, investment rose 10 per cent in 1987, measured in Ecu, and then increased by 15 per cent last year, according to figures from national chemical federations. This has helped keep demand lively for a range of components, from pumps and valves to pipework.

In the middle of this investment growth, some equipment suppliers have already begun to ponder how long these heated trading conditions will continue. No one expects them to go on indefinitely. Some sectors, such as chemicals and steel, are expecting more difficult business conditions, possibly from next year, and this will eventually feed back to equipment suppliers. The US machine tool industry, which has raised shipments by a third in the past 12 months, has already begun to see its order books dip.

Overall though, machinery makers, used to selling in price-distressed and product-saturated sectors, are enjoying a change for the luxury of equipment-hungry customers beating a path to their door.

Funding of research

How planning threatens British science

By David Sawers

A recent report from the Advisory Board of the Research Councils is only the latest of a series of reports from the Government's scientific advisers which set out an essentially Marxist approach to the organisation of science in Britain. Dr Max Perutz, the doyen of molecular biologists in Britain, has aptly described this latest report as a document that could have emerged from Brezhnev's Politburo. It advocates the amalgamation of the five research councils which distribute government funds in grants for research into one National Research Council.

This urge for centralised planning among the industrialists and scientists who man the Government's advisory committee does not mean that the Government has chosen closet Marxists to advise it, but that they are intellectually confused. Because a company has a desire to undertake research, many believe that the Government should similarly plan the research it finances; indeed, the proposed National Research Council would be expected to prepare a five-year plan for British science and engineering.

They do not seem to understand that the efficiency of a market economy results from the existence of a multiplicity of decision-takers, some of whom are likely to be right but many of whom will be wrong, just as a central planner might be.

Such advice would, in practice, mean that academic scientists were directed away from pure research to applied research. One result would certainly be a reduction in the output of research measured in knowledge, and consequently a reduction in the standards to which young scientists were educated; another might well be an increase in the number of the most creative scientists who chose to leave this country for places where they had freedom to do the research that they chose. The quality of academic science in this country would therefore decline; and industry might find that the quality of its recruits for applied research and development deteriorated as well.

These members also appear to suffer from the delusion that academic and therefore pure scientific research can be managed like industrial development; as they imagine that the five-year plan can contain targets against which annual progress can be monitored. In pure research, progress depends on ideas and observations, and is essentially unpredictable; a scientist will have an objective when he starts his research, but he cannot predict when he will reach it.

This misconception may arise from a failure to recognise the difference between academic science and engineer-

ing. Academic engineers cannot function effectively without contacts with industry, and one output of their research will be inventions which industry can use. Academic scientists, however, are concerned with the promotion of knowledge for its own sake, which may or may not lead to invention and industrial application at some time in the near or distant future; and they will usually require no contacts with industry to undertake their research. Engineering research is therefore more likely to be predictable, but it would still be naïve to imagine that companies can proceed to a place as the development of a new product might.

Scientists who are concerned with the financing of research may well feel under pressure to demonstrate that science as well as engineering can produce useful results, and so deserves more support from a government that has expressed a desire to see more exploitable research done in the UK. Industrialists may well imagine that pure academic research can be directed towards useful ends, like the choices of students; but the existence of a multiplicity of decision-makers is even more desirable than for industrial projects, because the outcome of research is less predictable.

If a government wished to improve the productivity of academic research, it would therefore seek to increase the number of sources of finance for research, not to reduce them. It may be no coincidence that medical research is one of the most flourishing branches of science in Britain, and is the branch in which there is the largest number of sources of funds for research. The Government should therefore encourage the existing research councils to compete for projects, and to increase the overlap between their areas of responsibility. It should also try to encourage more private sources of funds for academic research; tax allowances may be a dirty term in the Treasury, but this may be a field in which they could prove beneficial. Meanwhile, it may like to consider how to make the management of British science less bureaucratic.

David Sawers is co-author of *The Sources of Invention*, Macmillan 1988 and 1993.

LETTERS

Getting around London

From Mr Ian McIntyre

Sir, The problem with Mr Peter Bottomley's statement (Letters, July 13) that "the Government will only develop options which improve conditions for those who live and work in London," is: how will that judgement be made?

The East London Assessment Study identifies problems narrowly, even specifying seven particular points on the road systems in the area. It states that options will "alleviate conditions" at as many of these locations as possible.

The premise behind each option involving roads is that an increase in road capacity will "relieve main road problem locations." In other words, additional traffic will not be drawn in to use the new roads.

This seems an extraordinary assumption, given that demand for road space in London is for all practical purposes infinite. Few in London would choose to travel by public transport - something which indeed distinguishes London from other European cities. Also it takes no account of the effect of a Channel terminal at Kings

Private price

From Mr J.B. Freeman

Sir, Mr Samuel Brittan's Lombard column (July 17) advocates privatisation of the railways because "the hidden agenda of privatisation is to reduce union power."

Any experienced negotiator knows as an axiom that if you wish to change some long-standing practice you have to buy it out.

This is only one of the many elementary errors made by

More apathy than sympathy

From Mr Dennis Houston

Sir, Your front page (July 18), reporting the National Union of Railwaysmen rejection of the British Rail pay offer, states yet again that the travelling public "had up to now shown considerable sympathy for the rail workers." In the first five months of this year though, demand has leapt in two countries, with sales up a third in Italy and a quarter in West Germany. But in the UK, where demand has

come mainly from warehousing and distribution rather than factories, sales have started to fall as the retailing surge eases.

British Rail management. It is nothing to do with privatisation nor with middle class guilt. No experienced industrial relations manager worth his salt (which Mr Toole appears not to be) would dream of conducting important negotiations like these in the way that the RR management has done.

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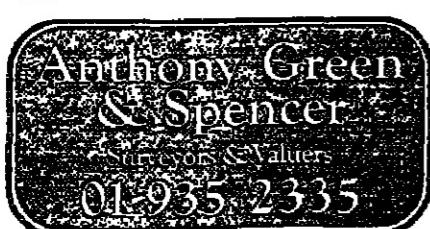
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FINANCIAL TIMES

Wednesday July 19 1989

**CONSTRUCTION
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Sandinista revolution is intact... at a price

Tim Coone examines Nicaragua's decade of hardship since the overthrow of Somoza

In a country where you can die at any time from bites of vampire bats, rabid dogs or tiny mosquitoes, it is an achievement to dream about a revolution - let alone make one.

Nevertheless, 10 years ago today a Central American dictator's status tumbled to the ground to the cheers of a jubilant crowd.

The place was Nicaragua: the dictator was Anastasio Somoza. His 43-year family dynasty came to a dusty end as the victorious guerrilla columns of the Sandinista Front of National Liberation (FSLN) converged on Managua, the capital. After 15 years of fighting in the mountains, the left-wing students who turned guerrillas became governors. To the embarrassment of the US State Department, revolution in Central America had become a reality.

Those heady days of triumph have been tempered by 10 gruelling years in power, eight of them at war with the Contras. These were formed from the praetorian guards of the ousted regime backed by wealthy peasants and big businessmen with US links but who depend for their survival upon a US umbilical cord.

The dead and wounded of both sides amount to 58,000 or 1.7 per cent of the population, according to government figures. By comparison, the US would have fought 20 Vietnamese wars to have suffered the equivalent in human losses.

The effect on the economy has been equally devastating. Living standards are now worse than before the revolution. Infant mortality and malnutrition are rising, as average wage levels have plummetted from \$15-\$20 per month.

About 70 per cent of industry is effectively bankrupt, according to Mr Edwards Mora, president of the Nicaraguan Association of Businessmen, while exports have fallen to only 30 per cent of their former levels. Trade and credit support,



Victorious Sandinista forces and Managua citizens celebrate in front of the Nicaraguan National Palace 10 years ago, as the National Guard surrendered, so ending the seven-week civil war.

mostly from the Soviet Union, underwrote the economy by some \$200 per capita per annum. That adds up to a disaster.

But such a conclusion ignores major social and political progress. Illiteracy was reduced from more than 50 per cent to only 12 per cent of the population in the first year of the revolution. Rural education before 1979 was virtually ignored. The advances in rural health care tell a similar tale.

It is the rural teachers and health workers and their new schools and clinics, however,

who have been the principal targets of the US-backed Contras.

Some 80,000 landless families, or 20 per cent of the rural population, have benefited from the post-revolutionary agrarian reform. The land reform co-operatives have likewise been primary targets of the Contras. Almost 3,000 farm-



ers have died defending their land.

On the political front, pluralism is paradoxically flourishing despite the war. All ideologies from retrograde Contra through to purist Maoist and Trotskyist, are represented by one of the 21 political parties that intend to fight the coming

general elections. There is a functioning mixed economy in which private ownership of the means of production still predominates over state-ownership.

Thus, despite their close identification with the Cuban revolution, the Sandinista leaders have chosen a very different course.

Mr Carlos Rafael Rodriguez, the Cuban vice president, wrote recently that "if the FSLN had tried to follow the path beaten by the Cuban revolution, it would have committed an irreparable error... it did not succumb to the temptation of making a premature socialist revolution. For those in Nicaragua that favour deeper changes, they have not abandoned them but are awaiting the moment and correct circumstances to put them into practice."

That wait and wartime economic attrition has exposed

EC company law plan could be blocked

By William Dawkins in Brussels

CONTROVERSIAL plans for a European company statute yesterday met a potential blocking minority of European Community governments in the first formal ministerial response to the scheme.

West Germany, Britain and the Netherlands gave varying sceptical receptions to the plan, presented by Mr Martin Bangemann, Internal Market and Industry Commissioner, to a meeting of trade and industry ministers.

It would allow cross-border mergers to incorporate as EC companies rather than having to choose the corporate laws of either of their countries.

Taxable incomes across bor-

ders could also be consolidated, a privilege not open to conventional international groups. The scheme would only be available to companies that adopted one of three models of worker consultation.

The scheme is a personal priority of Mr Jacques Delors, the Commission president, in his efforts to inject more social policy into the EC's internal market plan, and a bone of contention of Mrs Margaret Thatcher, the British Prime Minister.

Mr Francis Maude, Undersecretary of State at Britain's Trade and Industry Department, voiced unhappiness at the Commission's tactic of planning to put the statute to a

qualified majority vote. Britain would then find it harder to block the scheme, given that the blocking minority could easily fall apart.

London believes that worker representation should be left to national laws and that the plan is of limited value to business. The Netherlands also questioned the industrial usefulness of the scheme.

West Germany's anxieties, however, are over the Commission's use of majority voting, a tactic which tends to make it easier for the Brussels authorities to get their own way in the Council of Ministers, the member states' main decision-making forum.

Britain and West Germany suspect it is about social policy and tax, both areas needing unanimous ministerial decisions.

Soviet miners stay on strike despite offers

Continued from Page 1

or absorbed as another government subsidy.

Iron and steel plants, and several power stations, have reported that coal stocks are running critically low and one steel plant reported that it was reducing production.

Mr Valery Legachev, a spokesman for the regional strike committee in Kuznetzk, said the miners were continuing their walkout because Mr Slyunov had made "only general statements, not concrete proposals," AP reports from Moscow.

The industrial unrest has been aggravated by a resurgence of ethnic unrest in the Black Sea region of Abkhazia, Reuters reports from Moscow.

Since the trouble involving Abkhazians and Georgians broke out on Saturday, 16 have been killed. A party official in Sukhumi, the regional capital, said a state of emergency and curfew were being introduced from yesterday.

Tables turn in UK rail dispute

By Michael Cassell and Fiona Thompson in London

THE UK Government and British Rail yesterday rounded on the National Union of Railwaysmen for narrowly voting to go ahead with its fifth 24-hour strike after rejecting an improved 8.8 per cent pay offer.

As commuters struggled

through heavy traffic jams, particularly in London, ministers and British Rail executives viewed the rejection by the NUR executive as an opportunity to mount an offensive over the dispute. Ministers believe that after growing pub-

lic criticism of BR's handling of the dispute, the NUR's rejection of the offer has already lost it public sympathy.

Mr Paul Channon, Transport Secretary, described the NUR action as "absolutely amazing" and against the long-term interests of the rail workers.

In Parliament, Mr Norman Fowler, Employment Secretary, called on the NUR to abandon a "despicable" and "incomprehensible" act and to accept BR's 8.8 per cent offer on the Railway Staff National

tribunal's recommendation.

In response to calls for a ban on strikes in the public sector, Mr Fowler said the present review of laws covering industrial action, including public sector strikes would lead to proposals "in due course".

On the roads yesterday, there was greater congestion than during previous rail strikes. The situation was exacerbated by a 24-hour strike on London Underground and disruption of some bus services.

Details, Page 8 and 9

distortion by dock strikes in the UK and some other US export markets, which caused exporters to ship early and thus boosted the April figures at the expense of May.

Exports, at \$30.47bn, were 0.9 per cent down from the high April figure but still substantially higher than in any other previous month. The heaviest falls were in manufactured goods. The pattern of shipping movements appear to have been

include oil) are up 9.2 per cent and capital goods by 11.1 per cent. Exports in these categories are even more buoyant, with industrial supplies up 11.8 per cent and capital goods 14.8 per cent.

Over the year as a whole it is clear that import demand is no longer consumer-led. Car imports so far this year have risen only 2.8 per cent from a year earlier and consumer goods 6.7 per cent. By contrast, industrial supplies (which

include oil) are up 9.2 per cent and capital goods by 11.1 per cent. Exports in these categories are even more buoyant, with industrial supplies up 11.8 per cent and capital goods 14.8 per cent.

At the New York mid-session, all markets were trading steadily just above their lows. The dollar was quoted at Y141.45 and DMI 8815, just above its morning lows of Y141.05 and DMI 8830.

Jaruzelski's hat in the ring, Page 2

US trade deficit widens, dollar falls

Continued from Page 1

The surge in capital goods reflects large expansion plans in foreign-owned (mainly Japanese) plants in the Black Sea region of Abkhazia, Reuters reports from Moscow.

Since the trouble involving

Abkhazians and Georgians broke out on Saturday, 16 have been killed. A party official in Sukhumi, the regional capital, said a state of emergency and curfew were being introduced from yesterday.

Continued from Page 1

cover the event and public relations consultants were flown from Washington to mastermind the operation.

President Moi said before the bonfire was lit: "The ivory, which is worth Ksh60m, will go up in smoke in this animal sanctuary to signify our commitment to the cause of wildlife conservation both within and outside our borders."

"I hope our action will help to persuade others to appreciate the urgent need to take drastic steps to halt the wanton slaughter of elephants by

declining to trade in ivory and its products."

Over the last 10 years Kenya's elephant population has been cut from more than 65,000 to 17,000 and heavily armed poachers have battled poorly supplied wardens and anti-poaching units.

Wildlife experts have claimed that the inability to combat poaching during the last decade has stemmed largely from a lack of political will and widespread corruption among officials in the government and military.

Illegal ivory destroyed in Kenya

Continued from Page 1

in the last nine months, however, the Government has shown a determination to tackle the problem seriously.

Twenty poachers were killed in June after a shoot-to-kill policy was implemented. Elsewhere, the Minister of Tourism and Wildlife was replaced and, three months ago, the internationally-acclaimed

paleontologist, Mr Richard Leakey, was brought in to head the Wildlife Department which he is to reorganise and which will become semi-autonomous of government.

These developments should lead to Gen Jaruzelski's election by Parliament, which is still dominated by the Communist Party and its allies and to the appointment by him of a reformist, although Communists-dominated, Government.

However, the General has said he is "unsure" of winning sufficient votes and has again proposed Gen Czeslaw Kiszczak, Interior Minister, as an alternative candidate.

Meanwhile, Mr Adam Michnik - the Solidarity leader most enthusiastic about sharing Government power with reform-minded Communists - has accepted that the proposal has little support.

In an interview with Le Monde, the French newspaper, Mr Michnik followed Professor Bronislaw Geremek, parliamentary leader of the Solidarity group, in predicting a meeting between President Mikhail Gorbachev and Mr Lech Wałęsa this year.

On the agenda of such a meeting, he said, would be the de-Stalinisation of relations between our two countries, their perestroika, abandoning of dogmas and era of dictators.

Decisions. Decisions. Decisions. In the international arena, they can take forever. So while you're sitting on the sidelines twiddling your thumbs, your competition is out there. Wheeling and dealing.

But with Tokai Bank on your side, this problem simply does not exist.

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All the right answers. Right away.

THE LEX COLUMN

GEC makes new connections

Racial Telecom

Share price relative to the FT-A All-Share Index

240

220

200

180

160

140

120

100

Jan 1989 Jul

The cynical reaction to the link between GEC and Plessey on mobile phones is that Plessey shareholders should watch out: the more cosy the two companies become, the less the chance of an aggressive take-out price. The less cynical view is that the deal says nothing about the prospects of a bid at all. The two companies learnt from their mistake in not joining up to go for a Telepoint licence. In this next and much more important generation of personal communicators, they are simply sinking their differences in a joint candidacy which could prove unbeatable.

The truth probably lies somewhere in the middle. GEC will doubtless have calculated that it has nothing to lose. If it ends up owning Plessey, whose erratic profit record and ability to consume cash, is the cause of the group's current problems. Yet the planned sale removes the major reason for any bid speculation - the main prop under the current share price.

If it is a done deal, De La Rue's shares should go down, not up. But it would be dangerous to count out an unpredictable operator like Mr Robert Maxwell, who is De La Rue's biggest shareholder. He is showing a loss on his investment in De La Rue and the sale of Crossfield to Du Pont/Fuji.

According to the ideal European company of the future. There are two boards: a predominantly local one to run the British operations, and to make sure that the promised savings are made from putting Kenyon and Hodgson together, and a largely French one charged with building a big international group that will manage funerals all over the world.

The general idea seems to be that the British and the French make a better and more profitable job of burying people than anyone else. In most countries the undertaking business is apparently not just backward, but also highly fragmented, and given the high level of fixed costs, there must be plenty of good opportunities out there for someone who understands the business.

While yesterday's sketchy financial information made it unclear who will pay for this great thrust overseas, the presence of Lyonnaise des Eaux - which has already invested heavily in British water and is also dabbling in waste - is encouraging.

Crossfield is being sold at a 70 per cent premium to net asset value and an exit multiple of 17 times Crossfield's peak earnings. This is a stiff price but there is just an outside chance that Mr Maxwell may be prepared to top the offer and risk the anti-trust problems in order to prevent two wealthy giants moving into a market where Scitex has been remarkably successful. He is in an uncomfortable position. If he does nothing, the bid speculation subsides and so does the value of his De La Rue stake.

Putting the company on a normal market multiple, suggests De La Rue shares should be 21 below where they are now.

BAT

Among those who have booked a seat for the great

BAT carve-up, the oddest is surely GEC. It seems most unlikely that Lord Weinstock is interested in buying any of BAT's businesses, or indeed doing anything other than taking a punt with his company's spare cash. One has to admire the resilience of a company which can assist in the break-up of a group three times its own size, with an earnings record no worse and a share price performance very much better, shortly after being the target of a break-up itself. One looks forward to more newspaper articles from Lord Rees-Mogg on the sanctity of great companies, as at the time of the Metcalf bid.

Undertakers

Funeral directing may not have been what the EC had in mind when it set about developing a single market in services, but the three way link between two modest British undertakers and a French one creates a good approximation of the ideal European company of the future.

There are two boards: a predominantly local one to run the British operations, and to make sure that the promised savings are made from putting Kenyon and

FINANCIAL TIMES SURVEY

A long-predicted shake-up in the domestic and international courier and express industry is taking place as big operators prepare for the expanding European market. Costs are rising and more mergers and acquisitions lie ahead. Kevin Brown reports.

A bitter fight for higher volumes

AFTER several years of rapid growth, the European express and courier industry is in a state of flux as the principal players reposition themselves for the next stage of the game.

According to industry estimates, the European market is still growing at between 20 and 40 per cent a year, slightly slower than a couple of years ago, and is now worth between £1bn and £1.5bn.

But the cost of staying in the market is rising, and there has been strong pressure on margins as companies fight for the ever higher volumes needed to cover their high fixed costs.

The result has been a wave of mergers and acquisitions as some of the larger companies try to buy volume by snapping up the smaller fry.

Other companies have diversified into value added activities such as contract distribution in search of the profits and cash flow to keep them in the parcels business.

All this is happening against the background of the increasing Europeanisation of the market in advance of the completion of the European Community single market in 1992.

The cost of providing an integrated service throughout Europe is high, partly because of the extensive physical infra-

structure required, but also because of the information technology needed to provide a high quality service.

Given all these factors, most industry observers expect a major shake-out to gather pace over the next couple of years as some of the small and medium companies find their volume growth too small to finance the necessary investment.

Most agree that there will be room for regional operators, perhaps covering a single European Community country, and for niche operators, such as those specialising in the two and three-day markets.

However, the market will almost certainly continue to be dominated by the big four companies - United Parcel Service (UPS), DHL, Federal Express and TNT - which have the financial, technical and sales back-up of worldwide operations.

The big four have indicated that they are determined to remain as major players in the European market, but they appear to be adopting radically different strategies.

In recent months, the most active has been UPS, the world's biggest carrier of small packages, which was also the last of the big four to move

into Europe.

After watching the growth of

the European market from a

distance for several years, the

conservative UPS management

finally took the plunge late last

year when it bought Atlassair

in the UK, followed by IMI Air

Services, a major UK-based

courier with a worldwide net-

work.

Subsequently, UPS acquired

half a dozen companies

throughout Europe, effectively

buying the basis of a network

to be repainted in its brown

and gold corporate colours. In

addition, UPS is investing

heavily in its European hub at

Cologne.

They have obviously

decided to take Europe seri-

ously, and they are throwing a

lot of money at it. These acqui-

sitions will not have been

cheap," says Mr Martin White,

a consultant who follows the

industry for accountants Coop-

ers and Lybrand.

DHL's strategy has been

harder to fathom, but the com-

pany has ended the arms

length relationship which for-

merly existed with Elan Inter-

national, its parcels subsidiary,

and merged the company back

into the group's mainstream

operations.

Analysts say DHL probably

had difficulties in building suf-

ficient volume through Elan,

and has decided to refocus its

activities on its international

courier business, in which it is

the world leader.

TNT, the Australian trans-

port multinational, has also

been on the acquisition trail,

but principally to fill in gaps in

its existing European network,

notably in Spain, through the

purchase of Unitrans, and

Italy, where it bought Traco.

TNT also acquired Air de

Cologne from Scandinavian

Airline Systems and XP

Express from KLM Royal

Dutch Airlines.

However, in both cases the

driving force was the desire of

the airlines to get out of the

expensive parcels business to

concentrate on their core activi-

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Forwarders fight back; Role of scheduled airlines

Illustration: Robin MacFarlane

Editorial production: Roy Terry

ing and stock holding, will be far more important.

This means there will be increased demand for the specialised skills of the distribution companies who can maintain supplies to a manufacturer or retailer's Europe-wide markets from a reduced number of distribution points.

Federal Express, the last of the big four, seems to have decided to follow a twin track strategy which both keeps it in the parcels market and expands its existing distribution interests.

FedEx has made a couple of acquisitions in the mainstream parcels market, notably Home Delivery Services, from Littlewoods, which will help put FedEx second behind Royal Mail as the carrier of small packages in the UK.

FedEx has also acquired the US cargo airline Flying Tigers,

and plans to use some of that

airline's capacity to provide a

service between Europe and the Far East.

However, it is no secret that FedEx has experienced difficulty in generating sufficient volume in its European parcels business, and has suffered tight margins.

FedEx is fortunate, however, in having a second string to its bow in the form of the Systemline contract distribution business inherited from the Lex Group, the UK acquisition which brought the group to Europe in a major way several years ago.

FedEx is putting a substantial effort into building up Systemline, especially by extending to the division its exceptionally good information handling skills.

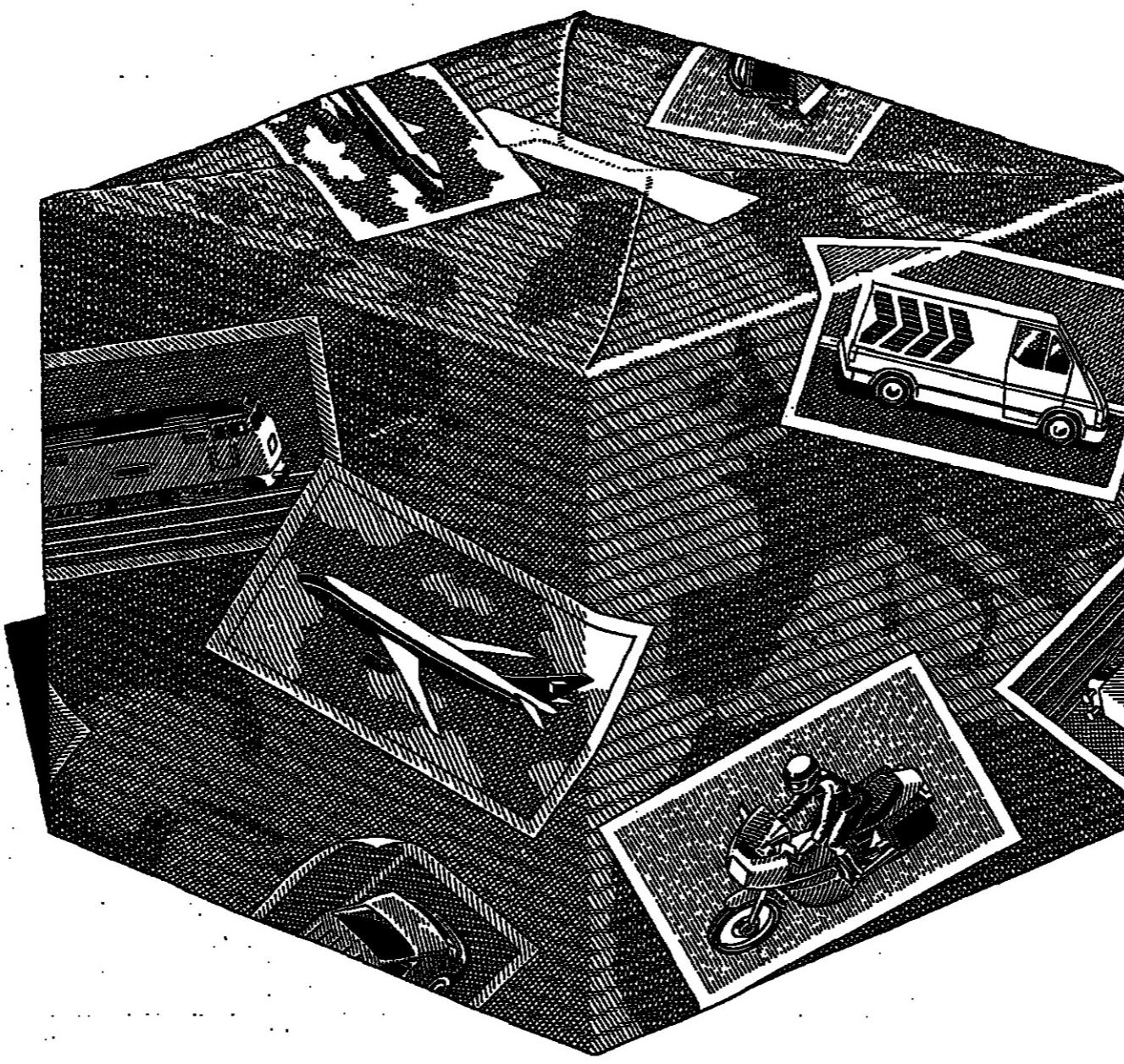
Meanwhile, it is becoming clear that the deregulation of the EC transport market as a result of the completion of the single market will probably lead to a significant increase in demand for distribution skills, especially at the express end of the market.

This is in contrast to the forecasts in the Cecchini report on economic integration, which suggested that the major boost to industry would come through reduced frontier delays.

The implications of all this are serious for smaller companies which are already finding it hard to achieve sufficiently high volumes to cover the costs of existing equipment.

The importance of volume is so enormous that it is difficult to see any medium-sized players surviving as pan-European

Continued on Page 9



Courier and Express Services

INTERNATIONAL REPLY SERVICE · INTERNATIONAL MAIL

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Your international mail.

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TNT
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INTERNATIONAL REPLY SERVICE · INTERNATIONAL MAIL

COURIER and EXPRESS SERVICES 2

Anne Hunter reports on Royal Mail Parcels 18 months after achieving autonomy

Separateness is strength at home and abroad

EIGHTEEN months ago, major restructuring within the Post Office resulted in the formation of four distinct operating divisions - the National Girobank, PO Counters, Royal Mail and Royal Mail Parcels. Under its new managing director, Mr Nick Nelson, formerly of DHL, RMP is now an autonomous division controlled by its own management board.

In the face of persistent challenges from the likes of TNT, RMP continues to dominate the UK express market by a wide margin while its international strength in tandem with newly-formed working agreements with other like-minded postal authorities, is limitless. In the year 1987/88 RMP carried more than 250m items and achieved a profit of £29m. Ninety-five per cent of that volume and revenue was generated by the business-to-business sector of the market.

The range of services include Datapost - with same-day delivery round London and some other UK cities and delivery guaranteed by 10am the morning following collection with pick-up times as late as 5pm in most areas.

Super 24 - a new service launched this year - provides guaranteed delivery by the close of business the day following collection while Super 48 is - as the name suggests - a two-day delivery service. A Standard Service offers UK domestic delivery, three days after despatch.

As the backbone of the RMP service range, Standard now incorporates Trakback for its contract business customers who, for a fee, can now receive

confirmation of delivery.

Both the "Super" services bring a free telephone delivery confirmation facility with inclusive loss or damage insurance up to £1,000 per item and money-back guarantees on failure of delivery within the agreed timescale. Datapost has a higher insurance cover of £5,000 per item plus £100-£10,000 for consequential loss insurance.

The three premium services are passed to items up to 30kg

while Standard service provides for higher weights. Using Standard, shippers can travel either via Direct Bar up to 25kg per parcel with no limit on the number of parcels or via MATES (Mobile All Purpose Trolley Equipment) for containers up to 364kg, and there are also pallets for containers up to one tonne.

Following two years of high growth with investment and expansion in both UK and International Datapost, Royal Mail Parcels is seeking new ways of securing its supply of essential aircraft capacity, particularly for its highly domestic Datapost traffic. After years of relying on chartering commercial airline capacity, RMP is examining proposals on the formation of a joint venture company between RMP and JEA Jersey European Airways.

Operating in excess of 50

flights a night in the UK alone, RMP has become aware of its increasing vulnerability in the face of a growing scarcity of available night-time freighter capacity.

"We are highly reliant on our capacity," explains Mr Nelson, "and we have therefore looked at the feasibility of linking up with the private sector

through a joint venture, as a means of providing capacity for our operation at the same time as giving us greater security of tenure. A final report on the formation of the joint venture company is due in July when a decision will be made."

This will not be the Post Office's first working association with the private sector. In 1988, the Royal Mail selected Securicor as the first licensee for Airstream, an international bulk mail service.

Handling more than 38m items of mail a year, Airstream was launched initially to large companies for single postings of more than 2kg of international airmail letters. In linking up with private

companies such as Securicor, Royal Mail extended the Airstream reach to meet the needs of smaller companies who deal with Securicor which in turn, collects and amalgamates the international airmail letters before passing them on to the Royal Mail Airstream network.

Moving into its stride as an autonomous division, Royal Mail Parcels in 1988 launched an aggressive marketing campaign in the face of increasing competition from the "new wave" express operators. However, progress was severely impeded by the 1988 postal strike which dealt RMP a crippling blow.

Admitting that the initial effects of the strike on the RMP operation were severe, Mr Nelson says: "First and foremost, it gave our customers the opportunity to 'feel' and experience the competition."

In spite of this, he claims that although it has taken until the beginning of this year the recovery rate is flowing smoothly and our current year on year growth rate is now above 1988 - which means we have recovered."

One of the major effects of the strike, however, was the loss of confidence factor so that while customers may be returning to RMP for some services, there is high resistance to putting all the eggs in the RMP basket again for fear of

recurring strikes. In a recent letter to the Union of Communication Workers, Mr Nelson highlighted the dangers for RMP in its continuing high degree of dependence on other post office businesses.

In a frank warning he advised that Royal Mail Parcels had lost the confidence of its customers and that without the guaranteed provision of reliable, uninterrupted service, it would lose out on the business to business front - altogether.

This situation has, more than anything else, opened the door for the likely adoption of the proposals embodied in a study document currently in circulation within the Post Office "null" which would, if approved, effect a further restructuring to separate RMP completely from the Letters Division with which it still shares many systems.

Arguing the case for simplifying the RMP operation to achieve higher standards of service quality and reliability, the Study Document, according to Mr Nelson, "is part of our attempts to respond to customers needs."

"We recognise for example, that Parcels' customers require products that are not necessarily aligned with those the Post Office offers." He gave the example of

RMP's long-established and vast, mail order, home delivery market, which in its increasing sophistication, is fast outgrowing the abilities of the Post Office and its "postie" delivery system.

Separated from letters, the RMP aim would be to establish its own independent dedicated network to bring end-to-end

Progress of RMP was severely impeded by the 1988 postal strike

control and flexibility to meet the customer needs.

While the formation of a discrete parcels division would enable RMP to tailor services more specifically to requirements, the move is nevertheless a political hot potato with the unions understandably concerned that a further restructuring, splitting parcels away from letters into a totally separate division, would leave Royal Mail Parcels perfectly placed for privatisation.

While RMP has continued to refine and expand its domestic service range, international development has escalated rapidly over the past two years.

In 1987, the main European Postal Authorities formed a joint venture Express Mail Ser-

vice company - EMS, in Brussels, to handle their international express mail operations. Datapost EMS was a founder member of this new company.

Since then, in the face of

increasing competition from the private sector and in the knowledge that international standards had to be agreed, another new company, called IFC, has been formed.

Funded and supported by

the Postal Authorities of the UK, all major European countries, Australia, Japan, Canada and the US, IFC's prime task is to take over the management and development of EMS and its Brussels hub which provides the air services used extensively by International Data-

post EMS and equivalent services in other countries for international express services.

Other IFC key tasks include the monitoring of services to ensure that quality meets pre-set standards and that products are harmonised throughout all member countries. In May this year, Royal Mail Parcels became the first Postal Authority to sign a partnership agreement with IFC.

Other founding members have followed and they are confident that IFC will appeal to many more international postal authorities. By signing the agreement, members are committed to meeting set service standards and their perfor-

mance will be monitored. If they fail, IFC reserves the right to turn to the private sector as alternative for carriage, in a particular market.

For its part of the bargain, IFC, as the administrator, operator and quality control body, must also guarantee its service standards and cost levels.

While the control and harmonisation of EMS should not present too many problems as it is already treated separately by those postal authorities operating the service, IFC will face a far more daunting challenge when it enters Phase 2 in its development. It will then take on the task of standardising the international tracking and tracing systems for members' Standard International parcels services, to ensure compatibility in all member countries.

While accepting that this will force Royal Mail Parcels into releasing some of its "sovereignty", Mr Nelson is happy enough to swallow that inevitability to benefit from the advantages the IFC system brings.

"We already have a substantial share of the international express freight market as well as a worldwide operational network for our distribution services," said Mr Nelson. "What this agreement does is build into that, an improved tracking, quality control and research capability which, we believe, will match anything else in the world."

"In a sense, it is harnessing the strengths of the international postal community to ensure the highest quality of service for Royal Mail Parcels."

Phillip Hastings sums up factors governing the selection of company fleets

Finance governs the choice

FOR the majority of people, the most visible aspect of courier/express industry services are the vehicles and motorcycles used to undertake collection and delivery work.

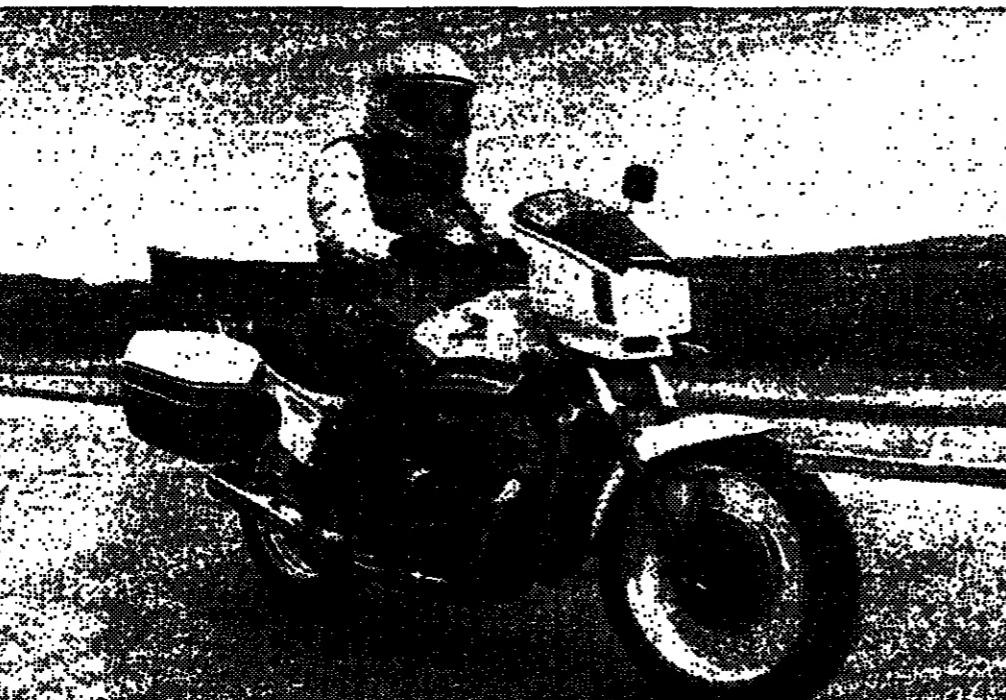
As a result, that equipment tends to become a marketing tool as well as an operational one, with company logos boldly proclaiming the name of the operator to existing and potential customers.

Decisions about fleet selection should theoretically, therefore, be based on detailed and objective assessments designed to spotlight the optimum equipment for the operations involved and also generally create a good impression of the company. However, in practice a fair degree of subjectivity tends to creep in, certainly among the medium and smaller operators.

Certain basic criteria have to be met, of course, but after that the choice of vehicle or motorcycle tends in many cases to come down to one of finance - for example, which dealer will offer the best terms - or the personal preference of the fleet/operations manager and drivers.

"During our early days, the thing which dominated our vehicle purchasing policy was the availability of finance but now we are better established we are looking much more at the quality and performance of different vehicles. For example, the latest vehicles we have acquired, through contract hire, are Mercedes 7.5-tonne vans," said the chairman of one medium-size UK domestic express parcels service operator.

"In my experience, there is generally little to choose between the higher quality vehicles, and the decision on which type to go for tends to come down to the experience of the local managers most closely involved with running them. They might be a little subjective in their assessment but if they are happy that the vehicles can do the job, then so be it."



Reliability and economy of performance are factors influencing the choice of motorcycles

Often, the first decision which a parcels operator has to make is exactly which of the many available methods of fleet acquisition to opt for.

With motorcycles, most operators either buy the bikes themselves and run a regular fleet replacement programme or employ owner-riders who have to sort out their own machines.

Where vans and larger vehicles are concerned, though, the method of fleet acquisition can vary quite considerably. Many operators still opt for traditional outright purchase, using either their own cash or borrowed funds.

Many operators still opt for outright purchase, using either their own cash or borrowed funds

and, for cash-rich organisations, flexibility in terms of vehicle choice and freedom of maintenance and hire purchase, costs such as maintenance and insurance are retained by the lessor.

Against that, there are a number of other cost factors which have to be taken into consideration. Chief among

them is the impact on corporate cash flow.

An alternative to outright purchase is financial leasing which involves the lessor paying a rental for vehicles which he never actually owns.

The rental pays the lessor's capital cost plus interest and profit over the period of the lease.

As with loans and hire purchase, costs such as maintenance and insurance are retained by the lessor.

Operating leases and contract hire are based on the lessor or contract hire company acquiring the vehicles, predicting the residual value of the vehicle at the end of the fixed period and charging a rental which reflects the predicted depreciation over that period, the interest, the cost and the profit.

Contract hire is basically a form of operating lease which includes extra features such as maintenance, fuel and tyre costs, fleet management and even, in the case of commercial vehicles, the provision of drivers. Such arrangements can significantly reduce user companies' administration time and costs. Among other major advantages is that vehicles can be financed

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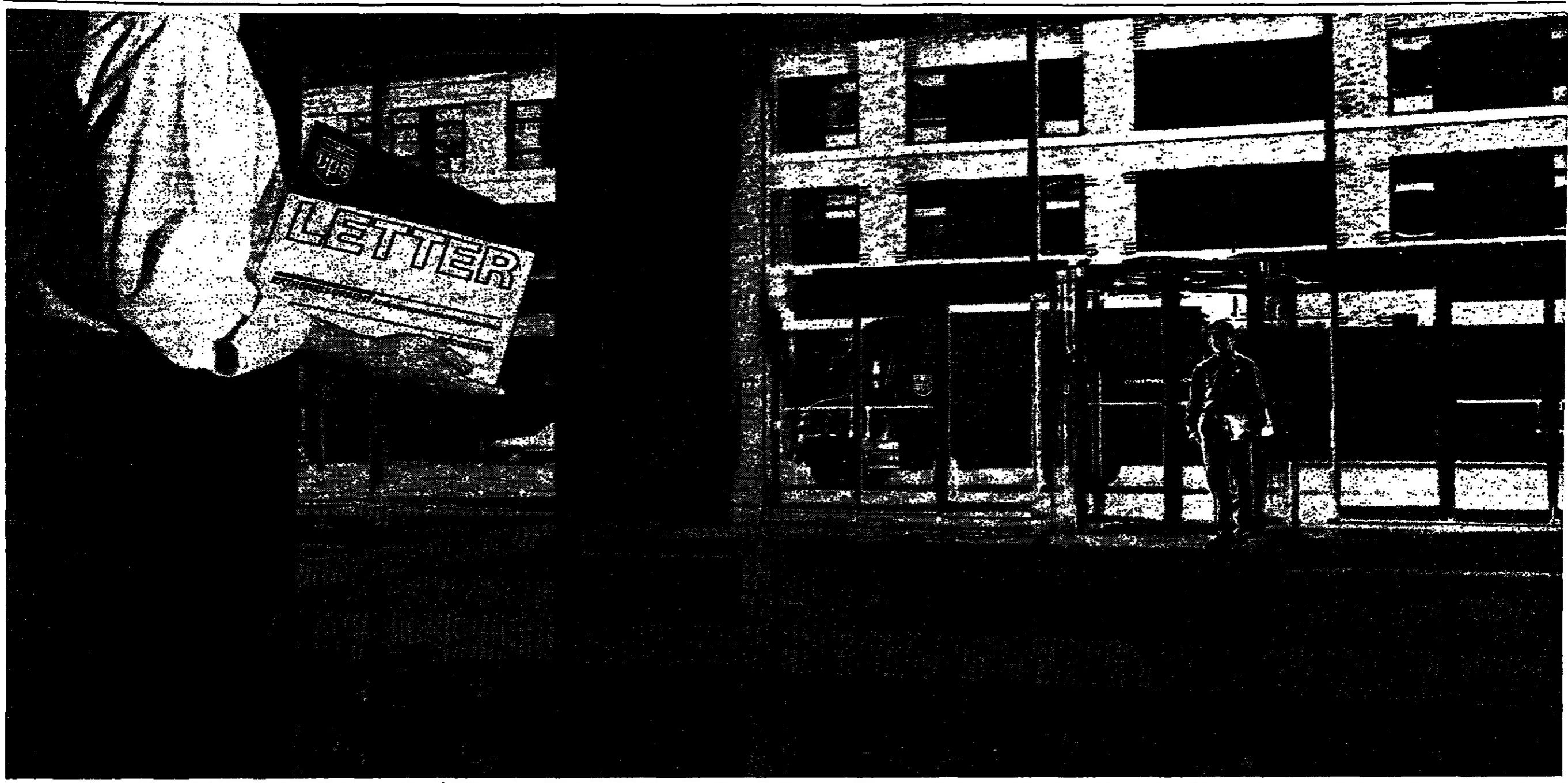
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COURIER and EXPRESS SERVICES 5

CONFIDENCE in the reliability of international mail services has been hit in recent years by labour disputes and other problems which contributed to the expansion of remail services around four years ago.

Remail — the process of taking mail from one country, where it would normally be mailed, and mailing it in another — has increased steadily over the past few years together with the number of operators in the business. It grew out of the need to overcome the generally slow delivery times of international mail by traditional postal services.

WHOLESALING**The answer for small operators**

WHILE "big is beautiful" appears to be the order of the day in the international air express/courier business, smaller operators do have the opportunity to compete and develop their own services by using the wholesale companies.

Wholesaling or co-loading allows smaller companies and even larger operators with small volumes to infrequent destinations to combine consignments through a co-ordinating company and thereby offer an international service. Such methods offer an economic alternative in that small companies do not have to support their own linehaul operations or overseas offices.

However, with the ever increasing range of services available, companies using wholesalers do need to monitor both costs and service standards if they are keen to maintain quality of product.

Competition is fierce and margins are slim making the wholesale operators, where they are not airlines themselves, vulnerable especially to larger companies prepared to use price incentives to win market share before stabilizing prices.

The growing involvement in the wholesale business by airlines was blamed last October

Companies need to monitor both costs and service standards

on the demise of Wholesale Courier Network which had been one of the larger and more established companies in the business.

WCS, formerly known as Inflight Courier Co-Load, went into voluntary liquidation with total debts in excess of £400,000 against assets and outstanding money owed of around £250,000. British Airways was the largest creditor being owed £347,862.

WCN started in 1983 and apart from its Heathrow base had operations in Australia, Tokyo and the USA. After a number of problems which affected cash flow, WCN faced added competition from British Airways which extended its service network by the takeover of British Caledonian.

It is difficult to judge the size of the wholesale market although with the increasing number of operators serving this sector, it does appear to be growing. However, it is a time of change with the express companies penetrating deeper into the market and taking a larger slice.

For the freight forwarders wholesaling provides a solution and an opportunity to broaden their services in competition with the integrated carriers. The latter have in turn been showing increasing interest in the movement of heavier freight which is the freight forwarders bread and butter business.

For European operations freight forwarders have a new ally in the form of European Express which launched its operations at the end of March. Mr Dallas Sherman, European Express's president, commented at the time of the launch: "We are providing a complete service for forwarders and express companies who have been excluded from the world's biggest revolution in freight transport since containerisation."

European Express, a subsidiary of Guinness Peat Aviation, describes itself as the first European wholesale express airline. From its Brussels hub it is initially serving 18 destinations including London, Stockholm, Copenhagen, Gothenburg, Paris, Luton, Amsterdam, Frankfurt, Stuttgart, Basle, Cologne, Bergamo and Madrid.

The company's start-up fleet consisted of four Convair 580s, two Falcons and a fleet of Beech 99s. Other aircraft are used under joint arrangements with other airlines.

It is not European Express's objective just to serve Europe, although under phase two of its development plan services to Scandinavia, Austria, Greece and extensions to Manchester and Glasgow in the UK will be introduced. Under phase three it is proposed to start long-haul services to North America and the Pacific Rim. No date has been put on

For private carriers this provides the opportunity to exploit the difference between the price charged by a post office to deliver international mail and the delivery costs that the private carrier can either negotiate with the post office in the country of final delivery, or could obtain by using the domestic postal tariff in the country of final delivery.

While remail has been in operation for several years, especially for mailing magazines, it is the deterioration of postal services and the needs of the business community for a reliable alternative that have resulted in many companies

moving into this field. Initially, postal authorities were very concerned about the threat of remail and some resorted to legal means to try to stop services. As time went by and relationships were forged between the remailers and post offices, so a better understanding has developed. In many cases remail business means more lucrative business in that they can gain more revenue from the remail coming into their system than the agreed rates for handling foreign mail.

In the case of the UK post office it receives \$3.20 per kilogram for incoming foreign mail as the imbalance charge, whereas examples of handling remail has brought more than three times that amount in revenue.

In addition, the post offices in many countries are getting together to offer competing services which match the remailers. In the UK, for instance, the Royal Mail linked up with the private carrier Securicor to operate its "Airstream" service which covers the bulk mailing of international letters. This has developed satisfactorily since being launched and is on line to reach its target of 2m items in the first year which ends in October.

In recent months further developments have been undertaken to broaden the

availability of services to smaller businesses. Mr Mike Humphries, the Securicor director responsible for the service, said that "month on month Airstream has been expanding at an average of 23 per cent and that the next two years should see major growth. Relationships with the Royal Mail have also developed well and we are looking to a long-term arrangement."

One area of concern is the standard of services provided. A number of the major operators have been trying to establish both international and national bodies to monitor standards and regulate operators.

However, little progress has been made except the setting up of remail committees by the Association of International Courier and Express Services in the UK and the International Express Carriers Conferences in the USA.

The size and range of operators varies widely. Each major remail centre such as New York, London and Tokyo, has a number of international as well as local remail companies. Several operators claim to provide a worldwide service while others just serve a few selected markets.

Because of the investment required to set up remail centres around the world, most remailers operate just a few centres around the world. Among the largest remailers are TNT and DHL.

DHL operates an 11-strong network of remail centres including New York, London, Athens, Copenhagen, Brussels, Hong Kong, Kuala Lumpur, Sydney, Auckland and Bahrain.

The mail is dispatched through the extensive DHL courier network with average delivery times being three-five days to other parts of the world.

DHL has been very quiet about any future plans for their remail activities. However, it is understood that they

The current market growth is estimated to be some 50 to 60 per cent a year with the total market being around 12 million items a day. This excludes the KLM magazine business.

"Customers get a better service through private enterprise," says Mr Paul Moorhouse, general manager of TNT Mailfast. "There has been a dramatic increase in the quality of service by the post offices but they cannot compete with the private systems and problems on co-ordination," adds Mr Moorhouse.

"Within recent times the UK, Canadian and French postal systems have all experienced

Singapore they actually reduced international postal charges to 50 per cent of overseas destinations by 25 per cent."

Having put in place such a large remail infrastructure, and Mr Moorhouse considers there could be another five to complete the network. TNT has introduced a wide range of added value services to meet all possible customer requirements.

One recent addition has been the introduction of a registered mail service. "We are looking at some 75 ideas for services at the present time of which 20 may be introduced," says Mr Moorhouse.

One of the latest of these services is the international business reply service whereby in the 33 countries where it has remail centres it can offer customers a comprehensive promotional service.

This includes help in preparing brochures and mailing lists, supply of the correct stationery and a local reply facility, so adding to the impact for the company promoting its goods or services. "The IBRS is only just taking off," says Mr Moorhouse, "but I foresee over the next few months a very significant increase and we guarantee at least a two times return on any mailing. One customer received a sevenfold increase."

Remail has certainly found a niche in the postal market which enhanced services from the post offices seem unlikely to remove. The main concerns appear to centre on quality of operator and service standards.

Post-hastened deliveries



Sorting mail at Hounslow



Paul Moorhouse

David Robinson discusses remail services

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Airstream, a quality contract Airmail service from the quality carrier, provides a comparative advantage that is not readily available to your European competitors.

Airstream's advantages are its speed and efficiency in moving large quantities of Airmail, direct, to its

destination. It is designed to save you time and money in your mailroom, so you can concentrate on what you do best.

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David Robinson

COURIER and EXPRESS SERVICES 6

The forwarders fight back

Tame reply to threat

IN SPITE of the increasing incursions of the large air express companies - UPS, Federal Express and DHL - airfreight forwarders in Europe still control 90 per cent of conventional airfreight volume.

The express companies have stolen an early march over the airfreight forwarders and airlines in the light weight, premium, small package market segment but while they would like to achieve a balance and capture some of the larger size traffic, those shipments that have traditionally moved by airfreight, they are experiencing difficulty increasing their shipment weights in Europe.

For that and a number of other reasons, the airfreight forwarders remain complacent about the new competition and the threat it represents. Yet, recent changes in transportation trends, increasing adherence to just-in-time inventory control, coupled with the persistent development and expansion of the air express operators in Europe, positively demands a competitive response from the forwarders.

The fact that the majority of air express and courier services and their systems are suitable for the carriage of small parcels only, is irrelevant; the shippers today like what they hear about the door-to-door express services and they are now demanding that their forwarders provide a door-to-door, express, reliable, guaranteed service for one inclusive rate with a single piece of documentation.

For shipments below 100 kg (and with the application of JIT inventory control, smaller shipment numbers are escalating) pressure on the forwarder to supply a door-to-door express service, is even greater. The high frequency, groupage surface operator can quite easily - and cost effectively - introduce express services. For the airfreight forwarder, however, there are a number of major hurdles to be overcome before they can a) provide these services, and b) make a profit from them.

Few of the airfreight for-

warders have been able to make a genuine air express response to the market demands primarily because they will (unless they control their own airlift) have to involve a number of third parties to do so. To compete effectively, they have to provide a premium, reliable, air express service at competitive rates. In most cases, this will demand the use of scheduled airline capacity and the airlines will expect a premium rate for the high service standards they must meet. The forwarder will incur various other costs including collection, delivery, 512B airline storage charges and handling charges.

Even those few that have entered the market, readily admit that making a profit on a door-to-door, air express service that relies on scheduled airline capacity, is extremely difficult. Couple this with the fact that the scheduled airlines often fall short on service standards and there is the reason why, in the early 70s, Emery chose to reduce its dependence on the scheduled carriers and invest in its own aircraft fleet.

Since then, Emery's move has been emulated by other American forwarders, CF Air (which recently acquired Emery), Airborne and Burlington among them. Emery's pioneering moves as an airfreight forwarder, into door-to-door air express with its own aircraft fleet, have been well chronicled. The large American company with its international network and considerable experience in the market, was acquired in April this year for \$230m by CF Air, the successful airfreight arm of the giant US trucking company, Consolidated Freightways. The two operations have since merged under the umbrella of "Emery Worldwide - a CF Company" providing am, pm and second

day deliveries throughout North America and Courier Express, Air Cargo and Economy services, internationally.

CF Air was already operating its own aircraft and the combined fleet now comprises 80 DC8 and B727 freighters which operate throughout the US from the Dayton, Ohio, hub with a daily DC8 freighter operation on the North Atlantic into Maastricht and Manchester.

The company's system and services are all geared to shipments of any size, any weight from envelopes to parcels to conventional air freight.

Back in the UK, one of the freight forwarders who has braved the air express elements is Rockwood International Freight. Comprising the recent freight forwarding acquisitions of Rockwood Holdings, a consistent USM star performer, Rockwood International Freight represents the combined operations of Walford Meadairs and Mercury.

Before its acquisition, Mercury responded to the air express threat with the launch of Quicksilver Express, a defined time, door-to-door or door-to-airport air express service which has been operated primarily in Europe. At Rockwood International Freight, Mr Peter Quantrell, managing director, believes that the forwarders are well equipped to compete in the express arena although he does agree that it is not easy to find airlines capable of meeting the required service standards.

That said, while the express operators specialise in the fast carriage of small parcels "the forwarder," says Mr Quantrell, "can offer a menu of options including a timed, express service, and that's our strength."

In advance of the entry of the American air express companies, IPEC pioneered pan-European road express services which it promoted as "faster and cheaper than air". Today, a number of surface forwarders with their concentration on the 25 kg to one tonne weight bracket, are making a determined bid to carve themselves a niche in the European express market ahead of 1992.

One such is Davies Turner which, with 120 years in the forwarding business, is working now to achieve full recognition as an express trucking operation. For years, the company has enjoyed an excellent reputation for reliable, high frequency Groupage services. Today, as its departures reach maximum levels, the company has grasped the opportunity to move its service range "up market". Same Day and Next Day delivery express services have been added to the Davies Turner Groupage operation between the UK and Germany - Davies Turner's fastest growing European market.

On many European routes the company's normal daily departures are every bit as fast as so-called "express" deliveries but at much lower rates. From London, Manchester, Birmingham and Bristol, Davies Turner operates daily trailer services to Ireland. "If we have the freight by noon, it will be delivered to the customer in Dublin and environs by noon next day and there are rapid transfers to western Ireland," says Mr Phillip Stevenson, Davies Turner joint managing director, who continued: "As Groupage operators, we've got used to living with low costs and rates so that ours can be as much as half those of the express companies in the 25 kg to one tonne bracket. Basically, anything over 25 kg to Ireland or across Europe, should move by surface transport."

Back on the air express front, there is, however, a new

very real opportunity for those forwarders wishing to expand profitably into this market. It comes in the form of a company called European Express - a Brussels-based, newly-formed subsidiary of GPA Guiness Peat Aviation, the Irish aircraft leasing giant.

Formed by GPA after its attention was drawn to the burgeoning air express market European Express is a neutral, wholesale, overnight European express system supported by the company's own aircraft fleet.

In marketing its services to the forwarders since its spring '89 launch, European Express has faced an uphill struggle in a generally unresponsive freight forwarding market. Looking at forecasts predicting air express, door-to-door growth rates in excess of 40 per cent a year, European Express firmly believes there are excellent opportunities for freight forwarders who wish to capture a share of this market.

"But," says Dal Sherman, president, "the forwarders first have to recognise that to keep a hold on their business, they are going to have to change their whole philosophy to be able to meet the door-to-door demands of the shippers."

The European Express concept embodies the company's recognition that for the forwarders, the investment required for marketing air express services and for the ground delivery and collection systems, is considerable. It therefore proposes that, instead of using dedicated, expensive aircraft or co-loading on competitors' aircraft or using scheduled airline services at unsuitable times of the day, the forwarders can easily and cost effectively adapt to the requirements of the overnight door-to-door air express market. This will mean using European Express which will tailor the service to the individual company's needs as either fully door-to-door with clearance or any other combination, eg, door to airport.

Anne Hunter



Lufthansa is to introduce a new express service in conjunction with subsidiary C+D Lufthansa. A Speedbird Courier (below) leaves Heathrow aboard Concorde. Picture: Ashley Ashwood



The role of scheduled airlines

Flight plans go awry

SCHEDULED airlines are in the main still struggling to produce a really effective response to the advent of integrated courier/express service companies which use their own aircraft and trucks to operate fast door-to-door delivery services.

A few carriers, notably leading European airlines such as British Airways, KLM, Lufthansa and Air France, have over the past few years introduced new door-to-door and airport-to-airport products aimed at trying to secure a niche in the international express freight market.

In most cases, those initiatives have involved trying to develop services in conjunction with their traditional business partners, the airfreight forwarders. Generally, though, these services have achieved only limited success.

Meanwhile, some of the

Flight schedules are governed by the needs of passengers

bolder scheduled airline ventures in the express sector have met with outright failure. Scandinavian Airlines System, for example, set up its own intra-European door-to-door delivery organisation, Air de Cologne, but was last year forced to sell the business to integrated operator TNT.

In retrospect, said Mr Johan Stahl, former managing director of Air de Cologne, it was easier to see that the traditional relationship between airlines and freight forwarders would make it very difficult for any carrier to develop successful door-to-door operations in Europe on its own.

"I think the failure to get such developments really moving is a mutual thing involving both the airlines and the forwarders. European airlines for their part have generally been more interested in developing inter-continental cargo rather than intra-European business. In so doing, they created the opportunity for the integrated carriers to come in because they were not offering the sort of overall service levels the market wanted," he claimed.

So where does all that leave European airlines now when it comes to competing for intra-European freight? Not very well placed according to Mr Stahl, with competition coming from road-based express service companies as well as from the air express operators.

The problem for the airlines, he says, is that their main flight schedules are governed by passenger considerations rather than by freight industry needs.

"There is no real solution to that for the airlines because

their main business is passengers. At the same time, airlines find it difficult to run the cost-efficient ground pick-up and delivery systems that are vital in the operation of overnight express freight services.

"They cannot take advantage of any economies of scale when it comes to those sort of operations," he added.

Because flight schedules are basically geared to passenger demands, BA in a bid to counter one of the problems highlighted by Mr Stahl introduced an operation called Midnight Express which involved running night-time B737 passenger aircraft flights between London Heathrow and Brussels to provide bellyhold cargo space for courier/express companies moving consignments overnight between the UK and the Continent.

However, difficulties with customs clearance at Heathrow forced BA to drop the service last year. Now, BA is concentrating on the development of international wholesale courier services, apparently with far greater success.

SAS, too, is having another go at the European express freight market. Efforts are now being concentrated on a product called Priority Cargo which involves using bellyhold capacity on its DC9 passenger aircraft.

The service offers speeded up acceptance/delivery operations and moneyback offers for broken promises on transit times arising from any SAS shortcomings.

Other leading European airlines are looking more at the longer haul sectors of the international express freight market.

The Netherlands's national carrier KLM, for example, is pressing ahead with further development of KLM Express, an operation specifically set up to run express delivery-to-the-door freight services. Initially, the emphasis is on developing traffic from overseas markets such as North America and the Far East into the Netherlands and the rest of Western Europe via Amsterdam's Schiphol Airport.

Two products are being marketed under the name KLM Cargo Speed, one for parcels up to around 25 kg and the other for larger consignments. However, development of the smaller parcels service has been hampered by KLM's recent sale to TNT of its intra-European distribution company, XP Express Parcel Systems, which had been handling the onward movement of incoming Doospeed small parcels traffic from Schiphol to final destination in Europe. As a result, KLM is concentrating on building up the development of heavier items, mainly in the 30-50 kg range, which are moved on from Schiphol to

gus. In what is claimed to be the first development of its kind, the carrier last year joined UK-based parcels carrier Securicor to set up a European door-to-door distribution company called Aer Securicor.

That company now operates intra-European parcels delivery services using Aer Lingus and Lufthansa air operations which link up Ireland, the UK and the Continent.

For Aer Lingus, formation of Aer Securicor has opened up the way for the airline to get in on the intra-European express market action without running into the sort of groundsides problems experienced by many other carriers.

Main benefits for Securicor centre on the opportunities to build up better air links in Europe without the need to invest heavily in its own air craft capacity.

A major problem for other airlines seeking to develop express services, centres on the limitations of their route networks. Customers generally prefer to use one or two express companies to handle all their shipments to worldwide destinations. An airline operating in particular markets can find it difficult to service points outside its own service network.

Those sort of considerations have prompted UK airline Virgin Atlantic, for example, to link up with courier company FDX International with a view to jointly developing courier/express traffic on the carrier's routes to the United States and Japan.

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COURIER and EXPRESS SERVICES 7

Phillip Hastings reports on the search for new markets

Asian and African excursions

RAPID expansion of courier and express services in Europe and North America over the past few years has tended to overshadow the industry's development in other parts of the world.

However, leading international courier/express organisations are now also pressing ahead with substantial expansion of operations in other major trading areas, notably Asia, and many of the economically less significant markets.

Not surprisingly, dynamic economic growth in Asian trade with the rest of the world is helping to put markets in that region high on the list for express service development behind North America and Europe - in fact, the Far East is now firmly established as the third point in the main triangle of coverage for the majority of global express operators.

Initially, much of the thrust into Asia by express companies involved the Pacific arena, i.e. trade with North America, as major United States operators such as Emery Worldwide, Federal Express, UPS (United Parcel Service) and Burlington Air Express built up services using a mix of own aircraft capacity and scheduled flights.

Over the past 18 months or so, though, the Europe/Asia sector has also come in for greater attention. Helping to inspire that trend has been the tendency among Far East exporters to try and sell more of their goods in Europe to take advantage of stronger currencies there.

Latest example of the increasing accent on development of Europe/Asia express services comes from Federal Express which, following completion of its acquisition of US cargo airline Flying Tigers next month, intends to use some of the latter's freighter aircraft to fly express traffic between Europe and the Far East.

"From August 7, we will be able to use a B747 freighter out of London Heathrow which will give us daily Far East line-haul capacity via Anchorage to Japan, Korea and Taiwan and links into Hong Kong, Singapore and the rest of the Pacific Rim region," said Mr David Wilcock, managing director of Federal Express UK International division.

A QUICK look through the Yellow Pages directory for most parts of the United Kingdom will reveal a seemingly ever-growing list of local courier companies using motor-cycles and vans to serve their own catchment areas and further afield.

In London, for example, there are at present reckoned to be something like 180 companies operating quick response motorcycle messenger services, ranging from the one-man-and-a-bike brigade through to leading operators with fleets of 50 or more vans and motorcycles.

Also included in that number - and now noticeably stepping up their presence in that market and in other parts of the UK - are the local messenger and instant response divisions of major national and international organisations such as Federal Express (Rapid Despatch), Securicor (Pony Express), TNT (TNT Courier) and City Link Transport.

Over the year or so, for example, Federal Express has launched a concerted drive into the UK same-day delivery market. Initially, efforts are being concentrated on building up operations in the London/M25 area but by mid-1990, the company plans to have same-day operations up and running in at least five major UK centres.

They will in turn form the foundations for a nationwide same-day pick-up and delivery service to be built up over the next couple of years.

Starting point for that development was the Federal Express acquisition towards the end of 1988 of London-based Winchmore Developments, a well-established operator in the London document and small package market where it traded as Concorde Despatch and Britannia Despatch.

Between them, those two courier companies have given Federal Express a same-day collection and delivery fleet of some 220 radio-controlled

He believes development will encourage Federal Express to generally raise the profile of its Asian services in the UK market, although the actual volume of business could depend greatly on how much UK exporters decide to try and develop Far East business at a time when much of their attention appears to be focused on Europe and Asia.

One of the most important Asian markets for the express industry as a whole - and one which is now seeing considerable courier/express service development - is Japan. However, to follow western express companies such as DHL, TNT, Skymark, Federal Express and UPS are having to adopt a somewhat different approach

The Japanese are fanatical about service quality and believe that the standard service should be the best possible, anyway."

Not surprisingly, Japanese shippers can tend to show a preference for using Japanese companies to move their documents and parcels. However, contrary to the possibly prejudiced view of some less successful outsiders, say locally-based express industry observers, that preference is not simply nationalistic favouritism.

"In my opinion it is not generally true that Japanese businesses will use an express courier company simply because it is Japanese. It is much more down to a company's ability to understand

working steadily, if still somewhat ponderously, towards improving the situation.

Rather less dynamic than Asia in terms of express industry development is the Middle East market, a situation encouraged by the subdued nature of that region's overall trade with the rest of the world over the past two or three years.

Major centres are generally included in most leading courier organisation's networks for document/small package traffic but there has been rather less development of other express parcel/freight services as operators have tended to concentrate on more exciting markets.

Major operators are also steadily increasing their coverage of Africa, although that continent can often present particular problems for courier/express companies. Some black African centres, for instance, are poorly served by scheduled airline services, making it hard for the couriers to offer the high speed delivery times available in other parts of the world.

At the same time, certain

Asian post office organisations still appear unhappy about having to compete with fast-growing courier operations and on occasions attempt to put restrictions on them, while other countries continue to be generally suspicious about the whole idea of courier services.

Because of its size and general economic importance, Nigeria is one of the most advanced black African markets when it comes to express service development. Prominent in that market is IML, the UK courier company recently acquired by US parcels giant UPS.

The main problems include a substantial imbalance of trade in favour of inbound traffic, often extremely antiquated communications, customs clearance systems that have yet to really come to grips with the concept of express services and a general national culture which is not particularly service-orientated.

More positively, the Chinese authorities are apparently aware of most of their shortcomings in areas such as communications and are said to be

devoting much effort to the concept of a premium service.

Federal Express aims to raise the profile of its Asian services

to developing business in Japan from that used in North America and Europe.

Japanese businesses tend to be fairly conservative and slow to change established practices. Converting them to using new courier and express services can therefore take considerably longer than might be the case in other parts of the world.

Also very much part of the Japanese business culture is an expectation of high service performance as a matter of course. Any failure is viewed far more dimly than in Europe or the United States, for example.

"Japanese customers expect to be told immediately of any problems but more than that, they also expect to be told what has been done to resolve them and receive assurance that they will not happen again," commented Mr John Morrison, the regional sales marketing manager for TNT Skymark Japan.

"That same level of expectation also means that it can be difficult to sell the concept of a premium service."

LOCAL COURIER COMPANIES

Where the going gets tougher

vehicles, including 96 motor-cycles, 20 light vans and 105 cars.

Meanwhile, Securicor's same-day despatch operation, Pony Express, is now rapidly being expanded to cover most major business centres in the UK. Over the past eight months, new branches have been opened in Croydon, Northampton, Cardiff and Southampton to bring the total to 20. Further branches are due to open in Basingstoke and Maidstone by the end of this year and plans are being drawn to open another three or four

in other parts of the country or membership of consortiums, in the latter case sometimes via franchise arrangements.

However, many local messenger companies have found it tough to expand their business beyond their particular home areas. Over the past two or three years, for example, a number of London-based motorcycle/van couriers have attempted to develop operations in other major centres such as Manchester and Birmingham. Most have subsequently been forced to pull out, but only after price wars which have also undermined the progress of locally-based operators.

Cities the size of Manchester, Birmingham and Glasgow in fact generate fairly substantial volumes of business and with the continuing growth of regional newspapers/publishing houses, advertising agencies and light industry, the traffic profile is similar to that of London's West End. This has helped several regionally-based companies develop into quite sizeable operations in their own right - Birmingham-based ERT, for example, now has some half a dozen offices covering and an annual turnover approaching £2m. Even smaller cities such as Leicester tend to have two or more specialist courier companies.

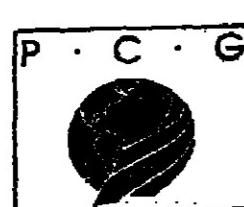
However, they still have to contend with the basic problem for most courier companies operating outside London: the fact that although most day-to-day costs are the same as in London, there is far less regular business available. That makes it harder for service operators to double up on jobs using the same bike or van, particularly on longer hauls. Attempts to do so often provoke adverse reactions from customers unhappy about slower delivery performance.

At the same time, competition is intense, even in the less economically-buoyant parts of the UK. Many unemployed people have used the government Enterprise Allowance scheme to set up small bike and van despatch operations in places such as Newcastle. Often operating from home with very low overheads, they can survive on lower rates than more substantial organisations.

Adding to the problems of too much competition have been efforts by some general freight transport and road haulage companies to build up courier services as an adjunct to their mainstream business. Taxi firms, too, have got in on the act, some of them quite successfully if only through acting as the local collection/delivery agent for a larger courier/express organisation.

Typical of the independent London specialists is Speed Couriers which in the 10 years since its formation has expanded to the point where it now

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OVER the past 20 years, the UK national express parcels industry has developed on the back of traditional road haulage or through the launch of dedicated services by early pioneers in the field such as City Link Transport.

Despite the predatory entry of foreign companies, the UK operators have kept a strong grip on their "smalls" in the UK market that is estimated to be worth some £600m a year with predictions of triple growth over the next five years.

Among the early starters to break into the UK express parcels market was Next Day Services, according to Mr Thomas:

"Others have homed in on Next Day services and now they are moving to upgrade to next morning, timed deliveries and, to a lesser extent, Same Day services."

In 1987, City Link introduced Phase 1 of its European expansion plan with the launch of Linkletter International and City Link Express as separate door-to-door services for express parcels market by others such as Interlink, ANC and Nightflight.

In the progressive development of its nationwide door-to-door express service, City Link, with its range of Same Day, Next Morning and the express document service, Linkletter, has established a UK branch network of 47

SECOND-TIER OPERATORS

Companies keep grip on 'smalls'

including Interlink, ANC and City Link which last year was rated number one in a major independent survey of the UK express parcels industry.

Meanwhile, the foreign operators - primarily American with the exception of the Australian company, TNT - have found that breaking into the UK express parcel delivery market was not nearly as easy as they had originally expected.

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the Bristol-based company, Interlink, was formed in 1981. Four years later Mr Richard Gabriel, chairman, took Interlink to the US and in May it expanded into Europe via the launch of a franchise operation in Germany.

While franchising has proved successful for Interlink in the UK where it works primarily with small franchisees, the German operation faced difficulties after only a month during which senior management changes in Germany were followed by warnings of substantial losses on the new operation. This warning culminated in a drop of 85p to 18p in Interlink shares on 29 June - the day before the end of the Company's financial year.

Moving into Germany - a notoriously "difficult" market under the tight control of a group of large transport operators - Interlink sold its franchises to established large companies who work (unless the small UK franchises) not prepared to devote themselves solely to Interlink representation. This then leaves the UK market to be served by a band of smaller operators

with the best franchise system in

the world's

This is brave talk indeed when aired in the shadow of the hugely expensive computerised information system of the likes of Federal Express and UPS. However, the proof of the FRS system will be in the application and these are early days yet for the company which at the end of this, its first year, expects to gross around £15m.

Described as an international courier service for documents, parcels and low weight freight, FRX is "selling" its concept and system to franchisees around the world who will gain access to the FRS system for £300,000 which will bring them an open line to all other companies in the organisation.

They will also benefit from what the company says is "the first and only fully integrated courier management EDI system in the world". Called ICMS, the system has been designed to provide "the fastest, most comprehensive, most accurate customer information service of any international courier company anywhere in the world".

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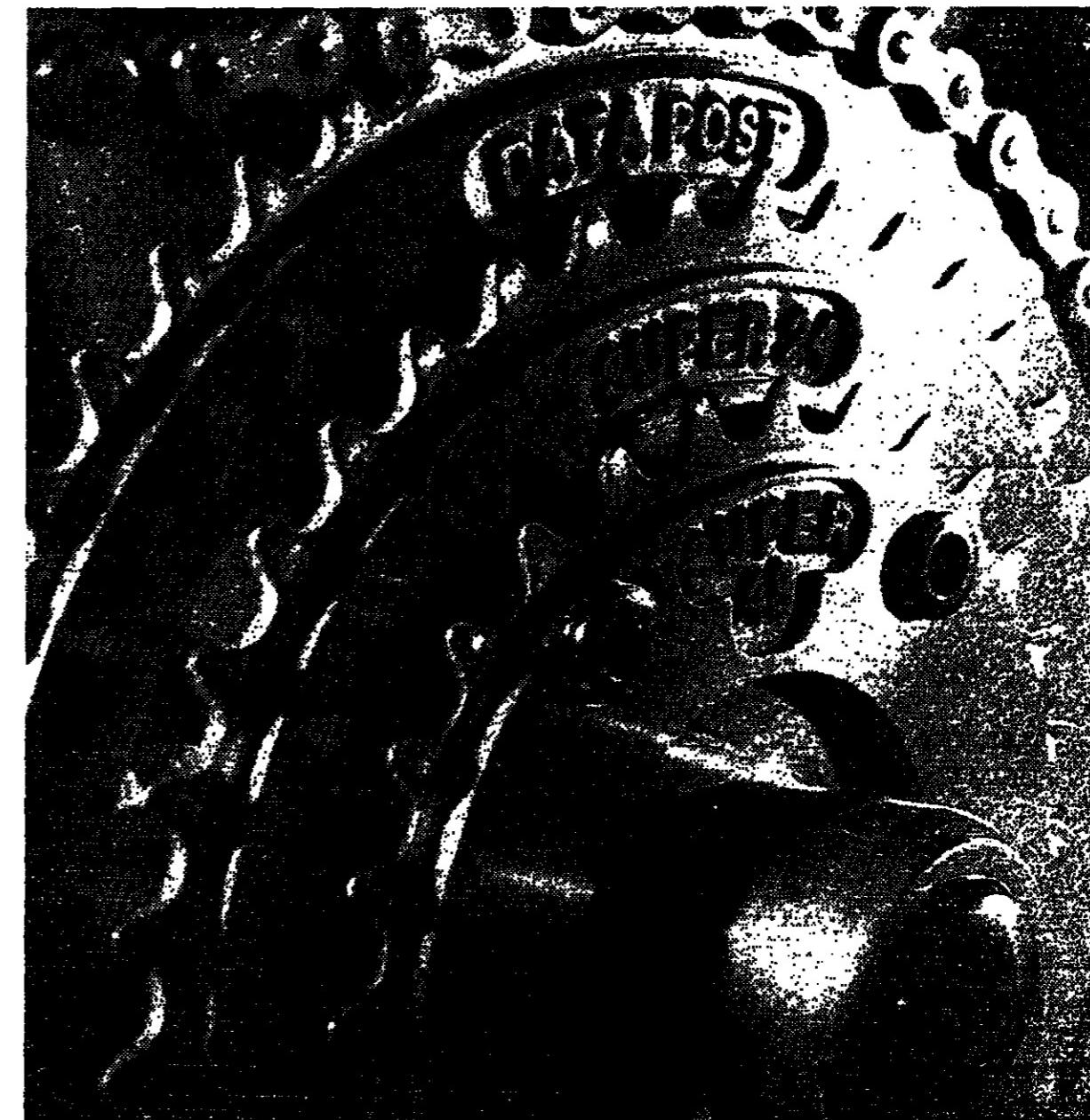
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Anne Hunter

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Philippe Hastings

COURIER and EXPRESS SERVICES 8

PLANS by TNT to set up a partnership with the Soviet Union's national airline Aeroflot to run international air express delivery services, probably from this autumn, highlight a marked acceleration in the general development of courier/express operations between Eastern Europe and the West.

Over the past year or so, for example, both TNT and rival air express organisation DHL have established significant joint venture operations in Hungary - TNT with national airline Malev and various other Hungarian organisations and DHL with state-owned transport company Hungarocamion.

Now, both companies are focusing greater attention on the Soviet Union. While TNT is finalising plans for its new venture with Aeroflot, DHL is this year opening up six new locations in the Soviet Union to bring its total in that country to 13 to cater for an expected future growth in Soviet Union business of something like 70 per cent a year.

In fact, Mr Larry Simpson, DHL's area manager for southern and eastern Europe, claims that air express operations in general will play a central role in the growth of overall trade between eastern Europe and the rest of the

world. "There is tremendous growth potential in eastern Europe and there is evidence that industries there are responding to the challenges of the new era. In 1988, our inbound-outbound traffic ratio for Eastern Europe was 3.2:1 but that is now down to around 2.6:1. We expect to see that longer term trend towards parity continue," he said.

Similar optimism is expressed by TNT. Although the company expects to start its new Russian operations in partnership with Aeroflot, there is a strong likelihood that the relationship will develop into a full joint venture operation within a year of start-up.

Latest TNT thinking on that development initially envisages using Budapest as a transhipment point. The idea would be to feed freight into Budapest from Cologne - the hub point for TNT's overall European air express operations - via a mighty British Aerospace 146-Q1 jet freighter aircraft operated on behalf of TNT's joint venture Hungarian company, TNT Malev Express.

Aeroflot or Malev would then fly the freight to and from Moscow.

"We will try and make the operation into an overnight delivery service for European freight destined for Moscow. The idea of establishing any east European hub at this stage, I would like to see Cologne eventually become our main hub for the whole of Europe, East and West," added Mr Watson.

For the moment, though, Budapest is continuing to develop as the principal gateway for general courier and express freight industry development in eastern

which in mid-1988 set up its joint venture with Hungaro camion.

Operating as DHL Budapest, the joint venture company now employs 22 staff and is expected to generate an annual revenue of \$5m by 1992.

Other parts of the same initiative involved relocating the company's eastern European head office from Frankfurt to Budapest and announcing plans to build a hub operation in the Hungarian centre to act as a distribution point for shipments into and out of eastern Europe as a whole.

Since the initial joint venture moves in Hungary, says DHL, considerable progress has been made in each of the areas covered by the agreement.

Following the relocation of the eastern European head office to Budapest, DHL's computerised Lasernet tracking and tracing system has been implemented in that market.

Meanwhile, negotiations covering the establishment of separate DHL-dedicated hub

processing company Balbona to operate 24-hour delivery air express services between eastern bloc markets and Western Europe.

Looking ahead, TNT plans to develop other eastern bloc air express traffic through Hungary. Mr Dan Dick, chief executive of TNT Europe and TNT Skypak, also believes the Hungarian development will open up further opportunities to link up Europe as a whole with other international markets.

"There are definite opportunities for operating through the eastern bloc into the Middle East and across to Asia, although such moves are probably another 12 months away at the moment."

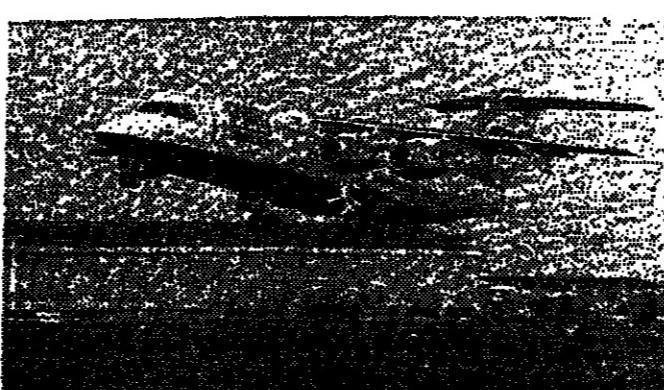
"We could establish links with those markets either using our own aircraft or in the same way we are operating in Hungary, i.e. working with a local airline," he claimed.

Other eastern bloc developments in the pipeline for TNT this year include the likely expansion of Mailfast remail operations in that market through a joint venture agreement with the Hungarian post office.

As with the TNT Malev development, a Mailfast tie-up with the Hungarians would be seen as a stepping stone to the rest of the eastern bloc.

Phillip Hastings discusses links with eastern Europe

Focus on the Soviet Union



After its joint venture with Hungarian airline Malev, TNT is now preparing for a take-off with Aeroflot in the Soviet Union

PROFILE: RED STAR

Streamlined independent



For Red Star, BR's parcels arm, 11,000 vans take the strain

through a two-day training course to highlight the new emphasis on standards and further training is planned. New uniforms have been issued and a new livery is being introduced for road vehicles. Red Star is actively investigating the BS5760 standard as a recognition and audit of quality of service. New simplified instruction manuals have been prepared which Mr Shooter describes as "tremendous tools".

Considerable investment is also being put into making the Parcel Points in stations more "customer friendly". Each Parcel Point is given a budget to choose from a wide range of furniture and accessory kits to lay out their own Parcel Point in an attractive and functional way while using a standard logo and colour scheme. "This delegation of decision making helps bring in the staff at the local front line as part of the new culture," comments Mr Shooter.

The latest expression of this policy is the appointment of 40 dedicated regional managers who are responsible for overseeing product quality and service standards.

Mr Shooter points out that these new managers have been drawn from several sources.

"A number of existing Red Star managers have been reconfirmed in their jobs while others have been recruited from retail and service areas such as the courier business and hotel and catering."

"Total quality management is the objective of all the changes," comments Mr Shooter. "It is all to do with developing a new culture," he adds.

The programme takes in all parts of the operation and will be on-going to improve both standards and quality.

All employees have gone

involved. To handle these pick-ups Red Star has arrangements with some 450 taxi operators. The guaranteed pick-up time is 90 minutes while the average is nearer 20-25 minutes.

Delivery options on time before 9 am in most major business centres, before 10.30 am and before 12.00 pm. These are differentiated by price. Mr Shooter says: "Red Star has a tremendous same-day ability which is increasing in importance with customers especially with the growth of 'Just-in-time' distribution systems and such factors as interest rates. Our strength is at the front end of the market and currently some 50 per cent of our business is same-day."

"We are very concerned with quality of service. Currently 97 per cent of our same-day/overnight business arrives on time but we are striving to improve on this. We do not fall into the trap of resting on our laurels. There is considerable customer interest in the manifestation of certain services."

Red Star operates a computer monitoring system to provide a check on performance as well as a customer proof of delivery if required. This tracking has recently been upgraded by the use of bar-codes on each consignment so that information is gained at several points. This will be used increasingly to extract management data in controlling operations and in serving the 100,000 customer base. Half of this total are account

customers.

Red Star's European and worldwide services which cover some 80 countries represent about 3 per cent of turnover. Mr Shooter hopes to increase this to around 20 per cent by 1992 especially through using its domestic network to feed the international services. "We will be able to offer later cut-off times and be more competitive on European services," he says. "Red Star is putting a lot of time into revamping the European network to give guaranteed times. It is a matter of tightening up the services and extending the range of products."

To serve its European services Red Star has opened a hub in Charleroi, Belgium, from where some 3,000 stations are linked in. The hub is operated by the Eural consortium of which Red Star is a member.

Red Star uses other Eural members to handle consignments in Belgium, the Netherlands and France but has other arrangements in other countries as it feels the level of service offered is not yet adequate.

"We are talking with a number of members about future arrangements," comments Mr Shooter. "There is huge potential, especially with DB in Germany, for example."

The Channel Tunnel will open up considerable opportunities to offer same-day express parcel services to Paris and Brussels and from those destinations into London. "We will be able to offer a faster service and competitive prices with the airlines we go from city centre to city centre," says Mr Shooter. "We are looking at a whole range of alternatives for night services and looking to get the maximum out of the passenger services."

In another development to further boost its European activities, Red Star has reached

an agreement with European Express on delivering door-to-door all consignments the airline brings into the UK. These parcels arrive in time to catch early morning trains so generally reach their destinations by midday. Mr Shooter is keen to expand this type of business and has set up a special facility at Heathrow in the Cargo Centre to handle this traffic.

Mr Shooter is optimistic for the future. With Red Star having re-organised, he sees the new culture showing through increasingly in the quality of service and product and in the organisation's competitive edge especially with the benefit of the Channel Tunnel in Europe.

David Robinson

Companies are investing heavily in communications systems

In touch with developments

AN INCREASINGLY important factor in the battle for courier/express parcels business is fast and efficient communication between service operators and their collection/delivery fleets.

The need to combine maximum fleet efficiency with a fast response to customer requests for collections or for information means leading courier companies are investing heavily in communication systems to keep them in touch with drivers on the road.

Included in the range of communication options open to express service operators are direct depot-to-vehicle computer terminals links, much-improved mobile radio equipment and vehicle tracking systems. All are designed to help express companies improve vehicle fleet operational efficiency and security.

A good example of the move towards computerised depot/vehicle communications is provided by Federal Express UK which this year installed computer terminals in 40 of its London-based collection/delivery vehicles which allow proof of delivery information collected through drivers' handheld trackers to be instantaneously fed into its computerised parcels tracking system.

The units, known as Dads (Digitally Assisted Despatch System), represent the latest enhancement to the Federal Express Cosmos (Customer Operations Service Master Online System) which handles the physical tracking of each package from point of origin through to final destination using a series of scans at different stages to read bar codes.

Key features of Cosmos 11B, as the upgraded system is called, are small hand-held units called supertrackers which are used by collection and delivery couriers to scan packages. Previously, drivers have had to wait until they returned to their depot to download information from their trackers into the Asys.

Now, by using the Dads terminals in their vehicles, they can transmit the information while they are still on the road.

Initially, the emphasis has been on collecting and transmitting proof of delivery information but a second phase development now being implemented includes the processing of pick-up details as well.

Meanwhile, other courier

and express companies looking to develop their depot/vehicle communications through the installation of computer terminals and equipment in vehicle cabs are being offered a variety of different packages by outside computer system companies and software houses.

Cambridge-based Spectronics

Micro Systems, for example, now offers a number of products and systems in that field. One of the latest, the S320 mobile data communications controller, is a small low-cost intelligent modem designed for use in a vehicle equipped with a conventional mobile radio. It enables the driver to have a two-way communication with a remote host computer over the radio link.

Another system developed by SMS, the S320, is geared particularly to companies operating courier delivery services. Now in use with operators

Band Three is based on the use of the old 405-line television channels, released by the government for commercial application to ease mounting congestion on other radio frequencies.

It is said to offer a host of improvements over traditional two-way radio systems, including better reception, faster connection times and complete privacy for the duration of the user's call.

The last-named feature can be surprisingly important for courier/express service operators - lack of privacy has been a problem with many traditional mobile radio systems,

with competitors finding ways of tuning into a particular radio frequency to pick up information which can be commercially sensitive.

Other alternatives for keeping closer tabs on vehicles while they are out on the road, particularly those involved with the movement of high value goods, include adopting some form of automatic vehicle location system. There are several methods available, all using different means of location.

Latest development in that sphere involves a system called Datatrak, a joint venture involving the Securicor Group and George Wimpey, which uses the principle of radio navigation as the base for vehicle tracking operations.

Main feature of Datatrak is its ability to track live the whereabouts and status of collection/delivery vehicles. That is achieved using a network of low frequency radio transmitters whose signals are received and processed by an in-vehicle locator unit to give very high accuracy wherever the vehicle is located.

Datatrak presents the fleet controller with a computerised moving-map display of the country showing the location of his vehicles. Additional data showing the status of the vehicle can also be displayed, including an emergency alarm facility designed to help direct emergency services to a particular vehicle.

Not surprisingly, the parcels delivery arm of the Securicor Group, Securicor Express, is leading express industry interests in Datatrak. The company is already using the system in London on a test basis to assess the best way of employing it throughout the UK. Initially, the emphasis is on using Datatrak for fleet management purposes but Securicor Express believes it will prove valuable from a security point of view as well.

Philip Hastings

such as DHL, the system centres on the use of mobile data terminals which can pass printed messages between depot and driver.

That, it is claimed, cuts down on time and eliminates the potential errors of verbal radio communication. A further advantage is that the driver does not have to be in his cab to receive the message, dispensing with unnecessary and time-wasting repetitions.

A third SMS system, the S340, additionally includes an alphanumeric keypad to enable drivers to send back information to their base.

Most significant development on the mobile radio front involves the Band Three Radio system, now being introduced throughout the United Kingdom.

The consortium behind the project is committed to establishing a national mobile radio network covering at least 80 per cent of the population.

Band Three is also said to provide an average connection time of just six seconds, as opposed to delays of several minutes that can be experienced by users of other mobile radio systems.

Even during peak periods, it is claimed, Band Three users will normally be connected with the receiver within 20 seconds.

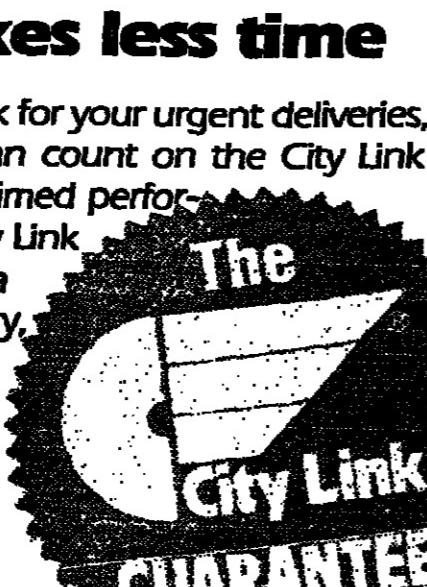
Another important difference between Band Three and other mobile communications systems is that with the other systems, someone on the road can only talk to the base station.

With Band Three, users will be able to have a conference call, with people on the road talking to each other as well as with their base, commented a spokesman for the consortium.

The Band Three network also provides a Radiotext facility which allows text to be sent over the network and printed out on a vehicle-fitted terminal.

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COURIER and EXPRESS SERVICES 9

Phillip Hastings discusses BA's express service

Airline finds rewarding niche

HAVING helped pioneer the airline industry's response to the express freight phenomenon with the launch of a door-to-door delivery service called Speedbird Express in 1982, British Airways subsequently struggled to find ways of further developing its role in that market.

Over the past couple of years, though, the carrier finally appears to have discovered a rewarding niche in the express business through the provision of international

liaison of passenger aircraft while the couriers physically carry the accompanying documentation necessary to satisfy Customs procedures at the destination end.

BA is operating direct on-board courier services to close on 60 centres around the world, with nearly 100 additional points in South America, the Caribbean and the Far East being covered indirectly through hubs such as Miami and Singapore.

"This service is geared specifically to wholesale business — we are not interested in the retail trade," said Mr Geoff Bridges, managing director cargo for BA.

"We see Speedbird Courier principally serving smaller courier companies and forwarders on prime traffic routes and major operators like DHL and company on the thinner routes."

Biggest market for Speedbird Courier is the US where a dozen cities are served

wholesale on-board courier services to other courier, express and freight forwarding companies.

In fact, such has been its recent growth in that sector that BA now claims to be the world's leading wholesale courier organisation, a development reflected in the carrier's recent acceptance as a member of the management committee for the express industry trade organisation, the European Express Association.

Operated under the product name Speedbird Courier, BA's wholesale service involves using airline personnel and retired staff to accompany carrier bags on the carrier's flights to selected destinations all over the world. The 30 kg courier bags containing documents, small packages, etc, are actually transported in the bell-

The pace of actual route

expansion will now begin to slow down although that development will continue. The main thing now will be to try and build in added value packages, for example consignment tracking," said Mr Bridges.

He also believes there may be scope to develop some European services to cater for same-day deliveries by running Speedbird Courier operations on late morning/early afternoon flights to key Continental centres.

Still on Europe, BA has not given up hope of resurrecting something along the lines of its ill-fated MidNight Express operation which was set up to offer overnight wholesale courier/express capacity between London and Brussels, using the belly-hold freight capacity of a passenger fleet B757. That operation folded after only a few months in mid-1988 due to problems with Customs clearance arrangements at the Heathrow end.

On a broader front, Mr Mick Fletcher, BA's marketing manager express services, is also keen to see the airline develop a *courier/airlines transfer* operation in London which will boost the development of Speedbird Courier services throughout the BA route network as opposed to just in and out of the UK.

BA has also over the past year massively expanded its Speedbird Courier service coverage of Continental Europe and Scandinavia to now include some 20 major cities, ranging from the popular express traffic points of Amsterdam, Brussels, Paris and Frankfurt to less well-served cities such as West Berlin, Istanbul and Moscow.

"In other words, we want to become a network seller, selling services from any point in the BA network to any point in the network," he adds.

Second string to the BA express bow is its original Speedbird Express service which offers door-to-door delivery of parcels and freight to nearly 40 countries worldwide.

The majority of traffic handled is either in or out of the UK, although BA is constantly looking to try and develop more movements between different points in its network. Speedbird Express is particularly designed for use by domestic express companies and freight forwarders which do not have the capacity to run their own international door-to-door express operations.

Meanwhile, a continuing upsurge in express business

A business upsurge has prompted BA to open another module at Heathrow

through London has prompted BA to open this month an additional module at its Heathrow express handling centre, which is attached to the carrier's import building.

The express handling unit is able to accept consignments up to 45 minutes before flight departure times and have inbound freight available for Customs clearance in the same length of time. Creation of additional space will effectively treble the size of the facility and cater for expected demand for the next couple of years.

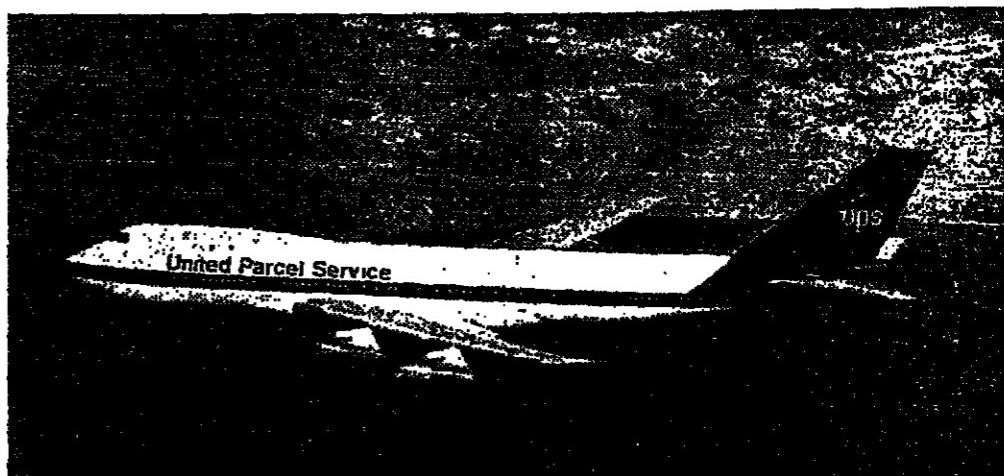
"Beyond that, we will be looking to have a separate express handling building, probably located at the back of the import shed. We have just set up a committee to look into that project," added Mr Bridges.

"In other words, we want to become a network seller, selling services from any point in the BA network to any point in the network," he adds.

Second string to the BA express bow is its original Speedbird Express service which offers door-to-door delivery of parcels and freight to nearly 40 countries worldwide.

UNITED PARCEL SERVICE

Big Brown hoists its colours



Flying high in Europe: over the past year UPS has begun to accelerate expansion plans

that it had to start making some major moves to expand its international operations, both in Europe and the Far East.

The first indication of a more aggressive approach in Europe came last autumn when the company revealed a reorganisation of its international management, setting up a new line of reporting rather than operating through the established main management structure.

Prior to the changes, European activities had been

into the highly sophisticated International Shipments Processing System developed by UPS to use worldwide in electronically processing and tracking its traffic.

UPS is investing some \$1.4bn in technology upgrade programme for the five years 1988-91 - latest move in that sphere involved the start in June on the construction of a new \$80m global computer and telecommunications centre at Mahwah, New Jersey.

The three-storey, 400,000 sq ft facility is intended to form the cornerstone of the parcel company's worldwide computer network in 1991.

From the UK, UPS now offers an international expedited document delivery service to some 160 countries around the world and express movement of durable packages to around 40 countries.

However, asked about the UK domestic express parcels market, where the name of UPS is mentioned in connection with nearly every significant operator which may or may not be up for sale, Mr Roth was more cautious.

"We still have a lot of work to do on the international side and we are likely to be concentrating heavily on that sector over the next couple of years. That said, if a good domestic company acquisition opportunity came up, then I am sure we would consider it."

Philip Hastings

TRACKING SYSTEMS

Customers kept in the know



Express operators are increasingly using bar coding to identify parcels handled in their system. Left: Sir Peter Abeles, group managing director of TNT Worldwide.

Hayes in Middlesex on line at the beginning of this year for trial purposes. The company's 120 UK branches are due to be put on line over the next year.

"Specially-designed barcode labels with unique identification will be scanned at the Securicor receiving depot. All the relevant information about that parcel will then be transmitted to a computer located at Securicor headquarters in Sutton for analysis and instant inquiry should a customer have a query," said a Securicor Express spokesman.

"Scanning the label on the parcel again when it leaves the receiving depot for local delivery completes the procedure, allowing speedy proof of delivery."

In addition to PODs (proof of delivery) and parcel tracing facilities, the SPARCS system will be used to automatically provide quotations, contracts, invoices and schedules. Approvals and authorisations will be given via terminals and processed electronically. Large volume customers will be able to link directly into SPARCS using EDI to transmit and receive information.

The last feature highlights the way that express service operators are increasingly having to develop methods of computerised communication and tracking which are compatible with general EDI systems. So-called closed loop information technology systems which can only be used in connection with one particular company's activities appear to have only a limited future.

Coupled with the development of information technology systems is an increasing tendency for major international express companies such as TNT, Federal Express and DHL to position both systems equipment and staff actually on site at the premises of major customers.

Domestic express delivery companies, too, are following suit. Lynx Express Delivery Network, for example, offers customers access to its central information technology system via a facility called the Lynx Manager which provides them with computer terminals and software for their own offices.

Parcels carrier Securicor Express, for example, is thus year pressing ahead with the implementation of a bar code-based UK parcels processing project, SPARCS (Securicor Parcels Computer System). The £2m-10m system is being progressively phased in over the next five years as part of a general customer service improvement programme.

The first stage involved putting the company's depot at

As computerisation and automation of data collection grew, said Sir Peter, TNT was implementing EDI (Electronic Data Interchange). That enabled the company's European mainframe, for example, to exchange information with any of its clients' mainframes, allowing them to track their own consignments through the TNT transportation system.

"EDI also allows staff in each of our contract depots to talk electronically to their clients about delivery requirements, production runs and sales promotional information, tracking and EDI."

Increasingly express operators are using bar coding to identify parcels being handled through their systems. While bar coding does not necessarily solve all the problems of data collection in parcels distribution, within well-defined systems it can work effectively.

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SECTION III

FINANCIAL TIMES SURVEY



The international telecommunications industry presents a picture of relentless change in the coming decade as it continues to be one of the driving forces behind the growing integration of the world economy, reports Terry Dodsworth, Industrial Editor.

Pace of change quickens

IT IS hard to recall that ten years or so ago the development of the world telecommunications industry seemed reasonably predictable.

At that time, the revolution in digital systems was only just beginning. Fibre optic cables were a new technological phenomenon. Mobile commercial telephony was in its infancy. And the big service monopolies, from American Telephone and Telegraph of the US, to NTT in Japan, and British Telecom in Europe, reigned serenely over their closely-guarded empires.

During the last decade, however, the industry has been subjected to a wave of change that has radically altered both its structure and the products on which it is based. It has lost its traditional, slow-moving character.

The stable relationships that had existed for decades between operating companies and their chief suppliers have been swept away. Many public telephone groups have been thrust into a much more competitive environment; and as technology has shortened the investment cycle, new products have been injected into the industry at breakneck speed. All this has occurred in a relatively benign environment.

Telecommunications cannot boast the sort of growth rates that have been familiar in the computer industry over the last two decades. But the industry has enjoyed a period of strong activity on both the equipment and the service side.

Spending on telecommunications products has grown at between seven and eight per cent a year during the late 1980s, jumping from \$83bn worldwide in 1986 to an estimated \$113bn in 1990, according to figures from the Telecommunications Research Centre, the Sussex-based market research group.

Telephone operating groups have also enjoyed a golden period of expansion during the long economic growth cycle which began in 1981-82, with revenues from telephone calls rising at around 10 per cent a year in many countries.

In the mobile telephone sector, the industry has even produced a new growth area which measures up to the more exciting parts of computing: several companies in this field are doubling the scope of their business every year.

Market forecasts suggest that the telecommunications sector overall may lose some of its buoyancy in the first half of the next decade, with growth

falling off to just under four per cent a year.

By then, many of the developed countries will have reached a plateau in their installation of digital switches and fibre optic networks, putting increased pressure on suppliers as volume levels off and prices erode.

It is hard to predict what will happen to call volume in this period, since it tends to be

sensitive to the general level of economic activity. Yet it seems certain that, in a broad sense, the large public operating companies will in many countries be exposed increasingly to the sort of competitive challenge that has already hit the equipment suppliers.

Market deregulation is

steadily expanding the scope of these companies to compete against each other, or for new start-up competitors to emerge. And as this liberalisation occurs it is opening up new service opportunities that give operating companies the chance to supplement their present revenues; value added

services, data transmission, video conferencing and the like all generate increased use of the basic telephone network.

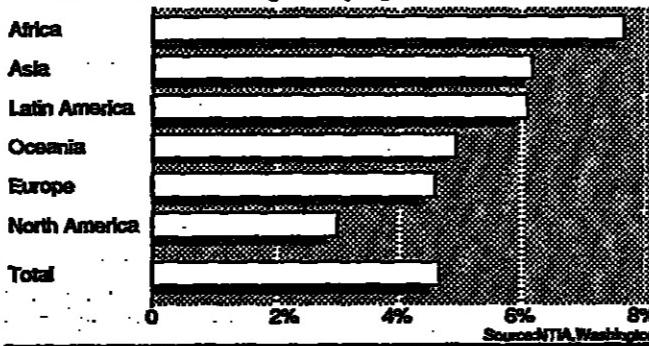
Within this picture of expansion and rapid change over the next decade, however, the way in which the financial markets will fall is much less predictable than in the past.

One of the uncertainties is the geographical pattern of growth in telecommunications. At present, the industry is totally dominated by the developed countries. The US Department of Commerce calculates, for example, that the main markets of the US, Soviet

Continued on page 2

World market

Telecommunications market growth by region 1985-1990



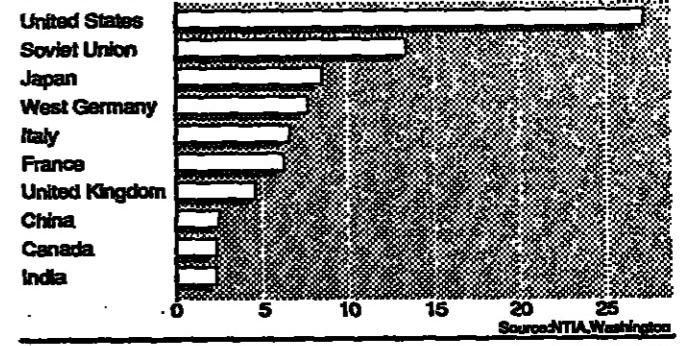
World's top 10 telecommunications equipment manufacturers

Rank	Company	Headquarters	1986 Sales \$ billion
1	AT&T Technologies	US	10.2
2	Alcatel NC*	Belgium	8.0
3	Siemens**	West Germany	5.4
4	NEC	Japan	4.5
5	Northern Telecom	Canada	4.4
6	IBM	US	3.8
7	Motorola	US	3.1
8	Ericsson	Sweden	3.1
9	Fujitsu	Japan	2.1
10	Philips	Netherlands	2.0

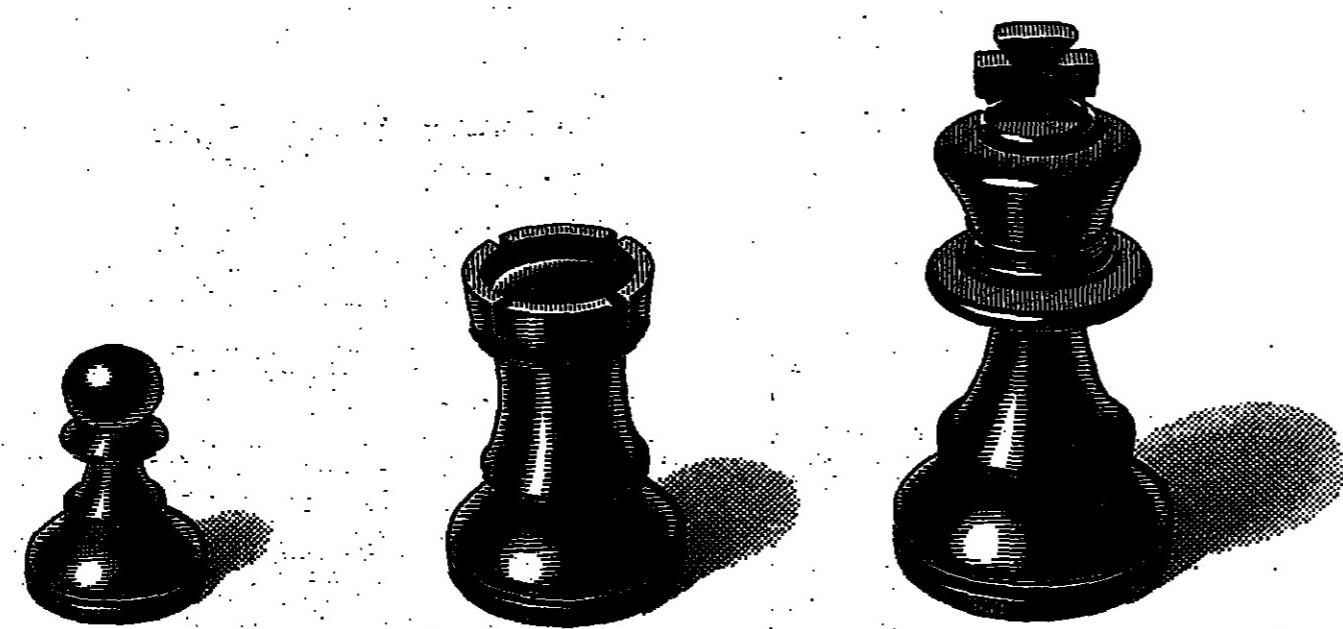
*Combined equipment sales of Alcatel and ITT; **Inc. GTE's 1986 sales; excludes US switching and CPE. Source: Arthur D.Little.

World forecast

Telecommunications equipment sales forecast for 1990 (\$ million)



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- 1981 -

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INTERNATIONAL TELECOMMUNICATIONS-2

Terry Dodsworth looks at changes in the industry in the 1980s

Quest for more consolidation

MR PHILIPPE GLUNTZ, chief executive of Alcatel, Europe's largest telecommunications group, believes that most of the crucial steps in the present round of restructuring among the world's leading telephone switch manufacturers have been completed.

There is likely to be a period of consolidation, he argues, in which the predatory companies absorb their acquisitions and the industry settles into its new shape; but at the same time, he adds, manufacturers are likely to switch their attention to the need for rationalisation in other areas of telecommunications equipment production.

The main action throughout the 1980s has been unquestionably directed at re-organisation among the producers of public telephone exchange equipment. These changes have been driven by a combination of factors, some of them common to restructuring in other maturing, high technology industries.

They include the increasing cost of research and development, which companies are trying to offset across larger markets; the rapid pace of technological change, which adds to the cost of investment in research and new capital equipment; the reduction in production manpower as telephone systems become increasingly dependent on software; and the growth of competition in the wake of market deregulation.

The forces have had a particularly heavy impact in Europe, where telecommunications manufacturing has been traditionally organised along national lines. Among the changes are:

- The reorganisation in France which started when the Thomson group was forced out of the industry by the Government, with the bulk of activity taken over by Alcatel, the subsidiary of Compagnie Générale d'Électricité.

- Alcatel's purchase of the European business of ITT, the US conglomerate, in a deal which propelled the French group into the leading position in the European industry, with heavy interests in West Germany and Spain as well as France.

- Further reorganisation in France when Compagnie Générale des Constructions Télé-



The main action throughout the 1980s has been unquestionably directed at re-organisation among producers of public telephone exchange equipment. Above: engineers in Italy testing an Italtel digital exchange.

phoniques was taken over by Ericsson of Sweden after a long battle with both AT&T of the US and Siemens of West Germany.

- AT&T's entry into Europe, an area from which it had been excluded historically through American anti-trust action that had split the US industry between AT&T in the home market, and ITT overseas. AT&T took a 50 per cent stake in APT, a jointly-held company with Philips of the Netherlands, a holding which it has subsequently increased.

- AT&T's deal this year in Italy, establishing a partnership agreement with Italtel. This is designed to bring AT&T technology to bear on the development of a new switch that will help to modernise the backward Italian telephone industry.

- The reorganisation of the British supply industry about 10 years ago in preparation for new digital switching systems. STC, at that time an ITT subsidiary, was excluded from the arrangements for developing the new range of switches for British Telecom.

- The subsequent UK move to bring in competition to GEC and Plessey, the remaining suppliers, in the shape of Ericsson, the Swedish manufacturer.

- The merger of the tele-

independent US public exchange producer. This will help AT&T maintain its leading position in the US, but it will continue to come under attack from overseas companies eyeing the US with relish. Stromberg-Carroll of Florida, for example, is now owned by GPT, the UK group, which is anxious to upgrade its switches from small rural exchanges to large urban equipment.

Several of these deals have also led to initiatives outside the field of public switching, which probably accounts for only a little more than a quarter of total equipment expenditure in the industry.

AT&T, for example, has invested in the manufacture of multiplexer equipment in western Europe as part of the deal with Philips. Alcatel has similarly established a position in the US through the ITT purchase; and Siemens, which failed to take over GTE's switch production, acquired some of the US group's other telecommunications equipment operations.

STC has similarly moved to expand its position in non-switch areas following the moves which severed its connections with ITT. In cables, for example, it has expanded rapidly to take advantage of its strong international position in the production of underwater fibre optic cabling. In this area, it has recently brought a plant in Oregon in the US, which has won its first contract for a cable under the Pacific.

In the US, with a larger and more homogeneous market than western Europe, the industry has been under less pressure to rationalise. Nevertheless, there have been some significant changes over the last decade or so as AT&T's dominant supplier position has come under pressure from deregulation.

The most significant shift in the market has been the emergence of Northern Telecom of Canada as a strong competitor in America, with a substantial share of installations of the new generation of digital switches. This has helped the Canadian group forge ahead with its international ambitions, leading to significant export orders to Japan and its purchase of a 28 per cent stake in STC in the UK.

AT&T's main counter-move against the expansion of Northern has been the deal under which it will eventually absorb the switch manufacturing activities of Mitel of Canada, although this agreement has still to

deliver on its promises. Elsewhere in Europe, Alcatel has brought together its own range of office exchanges with that of ITT to give itself of more complete range of equipment aimed at the full range of small and large companies.

Three areas stand out as primary targets for further re-organisation. Europe, for a start, is likely to provide plenty of scope as the plans for completion of the open internal market in 1992 gather pace. Many of the forthcoming deals are likely to be joint ventures rather than takeovers because of the way shareholding structures frequently make it difficult to push through clean acquisitions in continental countries. For example, STC recently reached such an agreement with SAT of France, in a transaction which will involve technology and marketing links in the transmissions field.

Second, is the issue of Japanese companies. The deregulation of the Japanese market, with the consequent ending of NTT's position as the monopoly telephone operating company, has undermined the traditional structure of the Japanese industry.

The big supplier companies, NEC, Fujitsu and Hitachi, have lost some of their close relationship with both NTT and each other; at the same time, they have seen additional markets opening up domestically among the new operating companies, and they have been pushing increasingly into export markets. Over time, they are expected to solidify their expansion into the US and Europe through acquisitions and joint ventures.

Finally, the explosive growth of mobile telecommunications will inevitably be accompanied by aggressive jockeying for position among the scores of companies moving into this field.

Motorola of the US has established a strong position in Europe, buying into the Scandinavian market with the acquisition of Storno in Denmark. European suppliers are also linking up in an elaborate network of cross-frontier alliances.

As the mobile market continues to grow and equipment prices fall, this restructuring is expected to continue around the world.

THE COSY monopolistic environment in which the world's public telecommunications operators (PTOs) have grown up is under threat from the twin forces of liberalisation and changing technology.

This process, in turn, is encouraging the PTOs to expand beyond their traditional frontiers. Doubts, however, remain both over their willingness and ability to attack new markets with entrepreneurial zeal.

Although the world-wide trend to deregulate telecommunications markets is the most important feature changing the landscape, it is not without exceptions. Since the Socialists returned to power last year, France has started to backtrack on freeing up telecommunications field.

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Some restructuring has also occurred in the office telephone exchange sector. This business is subject to similar economic pressures to those in the public exchange industry, with the increasing investment in research into digital systems, and the expansion of software content at the expense of hardware.

Cross-frontier deals in office switches include Siemens' recent agreement to acquire Rohn, the Californian-based producer, from IBM, the US computer company, as part of its drive into the US telephone market.

Siemens has also purchased Norton, the UK distributor of office exchanges, and a further attempt at reorganisation of the UK industry has been launched with BT's acquisition of Mitel of Canada, although this agreement has still to

only allows one competitor to British Telecom - Mercury Communications. This is on the theory that BT would find it easier to squash a multitude of small competitors than a single large one. The whole duopoly policy is up for review at the end of next year with the expectation that more competitors will be allowed.

The US has allowed a free-for-all in long-distance

Continued on Page 4

Leading world telecommunications markets

	USS million in 1988	1988
Country		
United States	24,009.0	
USSR	8,400.0	
Japan	7,080.0	
West Germany	5,880.0	
France	4,482.0	
Italy	3,918.0	
United Kingdom	3,146.0	
Canada	1,948.0	
China	1,422.0	
South Korea	1,422.0	
Spain	1,403.0	
Switzerland	1,380.9	
Austria	1,303.0	
Australia	1,204.0	
South Africa	984.0	
Brazil	872.0	
Mexico	851.0	
Sweden	845.0	
Austria	768.0	
Taiwan	683.0	
Indonesia	540.0	
Argentina	532.0	
Saudi Arabia	550.0	
Netherlands	544.7	
Hong Kong	521.4	
Norway	492.0	
Belgium	463.0	
Colombia	460.0	
East Germany	426.4	
Venezuela	416.4	
Singapore	315.2	
Finland	302.1	
Pakistan	296.5	
Greece	286.5	
Turkey	265.7	
Denmark	258.0	
New Zealand	241.1	
Iran	234.0	
Poland	227.5	
Bangladesh	211.6	
Egypt	210.4	
Hungary	197.5	
Israel	197.0	
Iraq	178.6	
Yugoslavia	161.4	
Czechoslovakia	144.7	
Portugal	121.4	
Algeria	109.4	
Syria	104.2	
United Arab Emirates	102.4	
Source: TRC		

Telecommunications market forecasts

Values in \$bn	1988	1989	1990	CAGR* 1989-93
Single Line Phone	1.6	1.6	1.6	3.0%
Data Comm Equipment	6.3	7.4	11.5	11.7%
Switching Equipment	6.6	6.6	6.6	1.5%
Call Processing Equipment	1.1	1.3	1.9	10%
Computer Machines	2.3	3.4	6.7	18.6%
Video Conferencing	0.1	0.2	0.2	25.7%
Public Equipment	6.3	6.6	9.0	8.1%
Public Services	124.8	127.9	144.8	3.1%
Cellular Radio	3.6	4.7	8.7	16.6%
TOTAL	152.6	159.5	191.3	4.6%

*Compound annual growth rate. Source, Dataquest, 1989

Source: TRC

The pace of change quickens

Continued from page 1
Union, Europe and Canada account for about 90 per cent of total market demand for telecommunications equipment at present.

Yet there is enormous capacity for expansion in developing countries if they can only harness sufficient resources. The disparities between the advanced and poorer countries are underscored by the installed base of telephone lines.

The US had around 121m lines in 1988, against 116m in the European Community and 45m in Japan. But India had only 3m to serve its vast population and Brazil just 7m - less than South Korea.

New initiatives to tackle these shortages and under-investment are now being developed by the World Bank and the International Telecommunication Union, but it is by no means clear what impact these will have.

Similarly, Eastern Europe and the Soviet Union have the potential to emerge over the next decade as much bigger telecommunications markets than they have been in the past.

The USSR, for example, has only about 30m lines at present, a ratio of just 11 per 100 people in West Germany, or 61 in Sweden, believed to be the highest level of penetration in the world.

In the years of the cold war, collaboration between the East and Western Europe has been limited, and to some extent was intensified by the tough moves on technology transfer initiated by the Reagan Administration in the US. But several Western countries have won supply contracts to Communist countries recently, and the reform movement that is spreading throughout this region is expected to lead both to more equipment exchanges and an increase in telephone traffic.

Another uncertainty hanging over the next few years concerns the regulatory environment. The idea of injecting more competition into the industry, initiated in the US in the 1970s, is now sweeping through the developed world and beginning to affect developing countries as well.

The pace of this change, and the precise way in which it will affect different areas remains to be seen, however. At the moment, deregulation is still in a highly experimental stage. Indeed, liberalisation is more properly seen as a process of

re-regulation, as Governments try to develop new rule books that allow competition to emerge at the telephone operating company level without undermining the principle of universal service

INTERNATIONAL TELECOMMUNICATIONS-3

Terry Dodsworth examines the big increase in telecommunications trading

Japan moves ahead rapidly in world market

COLOUR VIDEO PHONE: while video phones now transmit black and white still photos, the Panasonic unit pictured, left, on display at an advanced technology exhibition in Tokyo, transmits movement in colour. The phone is still several years away from being ready to market. Also pictured, centre, is a robotised production line for electronic equipment at Osaka.

WELL INTO the post-war period, trade in telecommunications products followed the trends that had been set in the days when the American and European industrial systems dominated the world.

Most of the big manufacturing nations were virtually self-sufficient in mainstream equipment such as public telephone exchanges and cables. Many of them were big exporters to the developing world or their former colonies. Interchange of goods between the leading manufacturing countries was not significant enough to raise fears of induced damage in the recipient countries.

As in many other high technology products, however, this neat balance of power has been deeply upset by the rapid emergence of Japan as one of the world's leading producers.

Japanese companies have quickly become the top exporters of telecommunications products, moving into markets all over the world. In the space of a decade or so, the Japanese industry has established an exceptionally strong position in neighbouring countries in the Pacific; and from there they have swept aggressively into the US and progressively into Europe.

The trade figures speak for themselves in the US, where a small surplus of \$275m on telecommunications products back in 1982 was reversed into a

South Korea. Conversely, figures published by the EC show a substantial US surplus with most European countries, amounting to a total of ECU40bn in 1988.

Indeed, the statistics indicate that European manufacturers are now being squeezed between the US industry and the Japanese. Since 1984, the region's deficit with Japan has soared from ECU421m to ECU 1.3bn; and overall, the EC's surplus in telecommunications equipment has slipped sharply from ECU1.5bn in 1986 to ECU0.1bn last year.

The strongest exporters in Europe are West Germany, with overseas sales in 1987 of \$1.1bn, according to Telecommunications Research Centre, the market research group. Sweden, the home base for Ericsson, the world's most internationally-minded telecommunications equipment and chip company, is the next largest in the region with exports of \$851m.

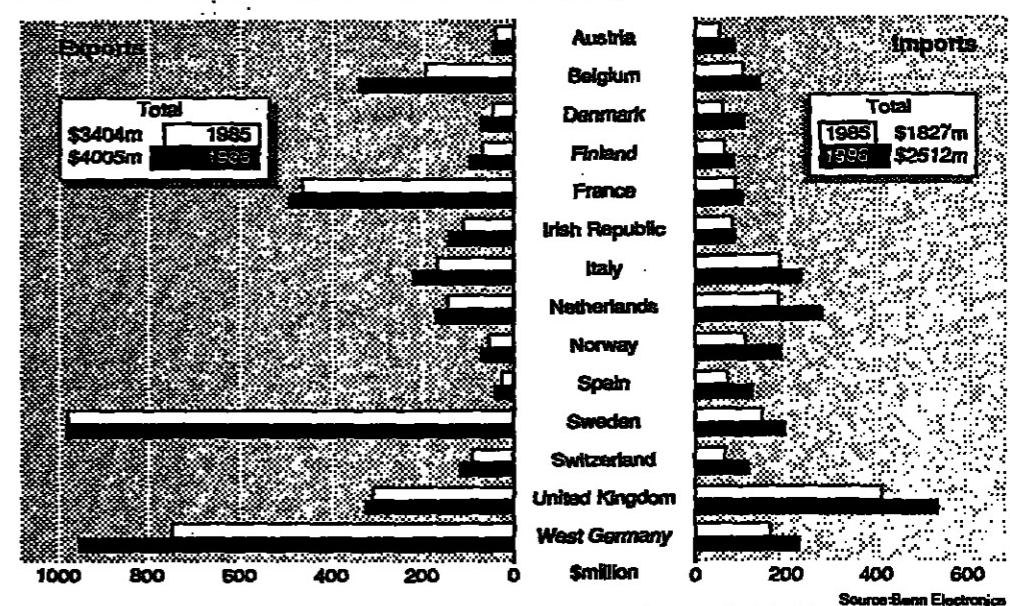
But the big surprises in exporting performance in recent years have been South Korea and Taiwan. Each of these two South East Asian countries achieved higher exports in 1987 than the UK, with sales of \$460m and \$398m respectively.

The issues raised by the arrival of Japan and these new Far Eastern competitors on the world scene have been underscored by the recent row over the terms under which Motorola, the US telecommunications and chip company, received access to the cellular mobile telephone market in Japan.

Motorola's entry into the Japanese telecommunications industry was originally presented as a breakthrough in attempts to open up the Japanese market to compensate for the hefty American imports from Japan. But the American company's dissatisfaction with the terms of the agreement led to a full-scale row which was only sorted out by heavy political intervention.

The Motorola case followed a similar tussle in Japan involving Cable & Wireless, the UK telephone operating group, two years or so earlier. At issue then was C&W's participation in a planned new international telephone company that was to compete with KDD, the established Japanese monopoly.

The bid from the C&W consortium was almost superseded by a rival offer from a group of all-Japanese companies, and a compromise which allowed

European telecommunications equipment

Austria
Belgium
Denmark
Finland
France
Irish Republic
Italy
Netherlands
Norway
Spain
Sweden
Switzerland
United Kingdom
West Germany

Imports
Total
1985 \$1827m
1988 \$2812m

Source: Bnn Electronics
plaining at misuse by the other.

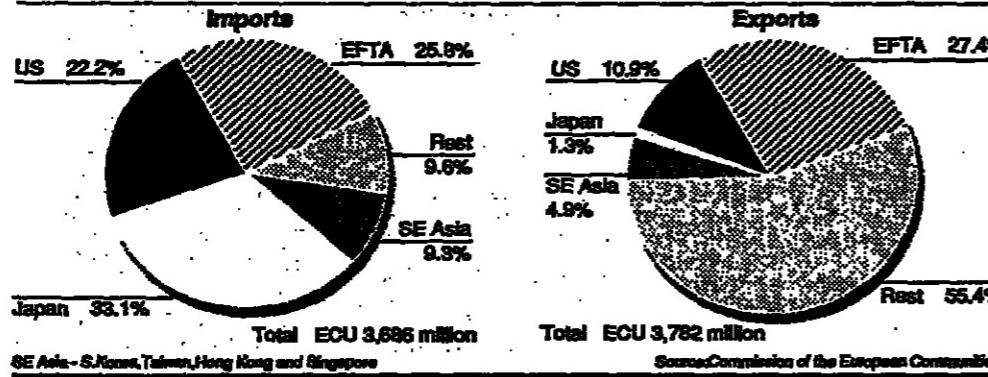
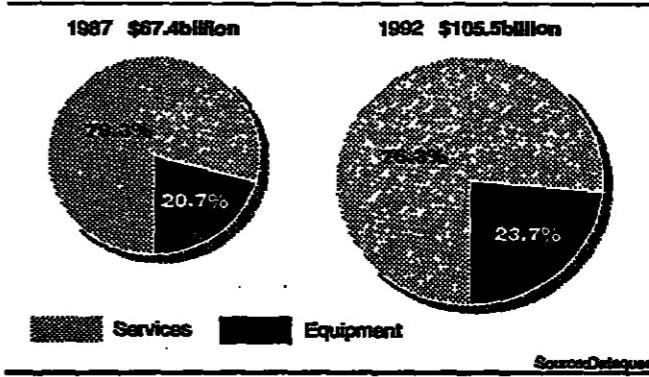
Nevertheless, the arguments have reflected significant disagreements over market access which arise from increasing attempts to trade across frontiers. The US has been deeply concerned that American Telephone and Telegraph, the leading American manufacturing company and long-distance operator, has faced in its attempts to form production alliances in Western Europe.

The Europeans have been similarly unhappy about the failure of European companies to make a serious impact on the market in large telephone exchanges in the US.

Unlike telephone sets and satellite equipment, where the Japanese producers have made their initial inroads in America, central telephone exchanges require elaborate technical licensing procedures to be sold in the American market, and the Europeans claim that these have been used to make it difficult for them to set up in competition with the indigenous American producers.

Further arguments are now threatened in the area of value added services, where the US is

Continued on page 4

EC equipment trade, 1988**European public telecommunications market****Bridging the gap.**

Successful communication means never missing a step from sender to receiver.

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INTERNATIONAL TELECOMMUNICATIONS-4

THE ABILITY to use your existing office telephone line to make a telephone call and send a facsimile or data message simultaneously may seem an attractive proposition. At least, the telephone companies in the US, Europe and Japan are hard at work trying to persuade customers that such services are a solution for many business problems.

But as the telephone companies and the equipment manufacturers continue to pour money into developments of these services — over \$2bn so far — there is growing concern that they have been developed for the convenience of the telephone companies rather than the needs of business users.

The acronym for such services, ISDN (Integrated Ser-

In the US, companies are successfully using ISDN on a local basis

vices digital network), has been widely and jokingly referred to as "Integrated services I don't need" and, more recently, services "I still don't need." Unfortunately for the telephone companies, in practice that appears to be the case.

The most significant reason seems to be that ISDN services are only available in isolated geographical pockets, even in the US where all the regional Bell Operating companies have heavily committed themselves to giving their business customers ISDN. That is because

Integrated services digital networks

Global standard delay

ISDN signals can only be transmitted using the newer digital telephone exchanges, not the older analogue ones.

Although most of the world's telephone companies are investing heavily in digital technology, it will be some time — if ever — before true end-to-end digital services are available.

That problem has been recognised by NTT, the local telephone operating company in Japan. To try and overcome the problem of a slow take-up of ISDN services, NTT has decided to accelerate its programme for supplying ISDN services nationwide.

NTT began offering ISDN services in Tokyo, Osaka and Nagoya in April 1988, and by April 1989 had only 1,000 customers. Now NTT is planning to introduce a nationwide service by April 1990, at least two years ahead of the initial target date.

As a result of the accelerated roll-out, NTT is predicting it will have 100,000 customers for its ISDN services by the end of 1990.

An additional factor hampering the take-up has been delays in setting the standards to which services will operate — a full set of standards will not be ready until 1992 at the earliest.

That has hindered the implementation of both national and

international services, as users have been reluctant to invest in equipment which could be obsolete in a few years time.

In spite of standards delays, telephone operators in the UK, West Germany, France and Italy are looking at plans to link their national ISDN networks together internationally.

British Telecom, for example, plans to have an international telephone exchange handling ISDN calls in service by the first half of 1990.

McDonald's claims the first building in the US dedicated to ISDN

In other countries such as the US, companies that are using ISDN most successfully are doing so on a local basis, by linking local sites together.

McDonald's, the US hamburger group has linked six local sites together using ISDN in the Chicago area, including the Hamburger University — the McDonald's training school at Oak Brook, Illinois. Showpiece of the network is the McDonald's headquarters building, which claims to be the first building in the US to be completely dedicated to using ISDN.

Because the telecommunications companies have been slow in setting the standards, they have been outstripped by political as well as technical developments. In particular the growing forces of liberalisation in the telecommunications industry worldwide — with the two main forces of the US and the UK leading the way — have enabled large national and multi-national companies to set up their own private telephone networks, by-passing the telephone operating company. As a result, the telephone companies are moving down market and targeting the smaller businesses for their ISDN services.

In addition, as ISDN services allow only small amounts of data to be transmitted down the telephone lines, companies with large data requirements are turning to other methods of transmitting their computer information, such as high capacity dedicated lines.

Telephone companies, particularly in the US, Japan and the UK are bundling together ISDN lines to give much higher transmission speeds to encourage large data users to use ISDN.

One of the main advantages of using the ISDN format pointed by McDonald's is more to do with computer wiring than the transmission services marketed by the telephone companies.

With ISDN both the phone and the computer terminal are plugged into the building's internal telephone network, and so can be unplugged and moved with their owner — considerably cheaper than having to rewire the computer terminal every time someone changes desk.

However, many onlookers believe the McDonald's experience will be a relatively isolated one, because there is a growing trend for companies to wire up their personal computers with local area networks, obviating the need to use the telephone network. Because suppliers of local area networks are not constrained by the standards problem facing the telephone companies, and are selling their wares in a highly competitive environment, many of their products have sophisticated features which the telephone companies will be unable to match on ISDN.

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In spite of the initial slow take up, however, most analysts are confident that ISDN services will take off. Technology research organisation, Dataquest, predicts that worldwide it will take until 1993 before 100,000 lines of ISDN are in use. But by 1997 there will be 600,000 lines installed.

Whatever the interest now being shown by business customers in ISDN service, the telephone companies are unlikely to drop their plans for the service. One of the main reasons for that is that they can provide them by putting advanced electronics on the end of existing cables — they do not have to dig up all the cables in the ground to offer the services. With between 50 and 70 per cent of the telephone network operators' assets installed underground, they will be promoting their ISDN services for some time to come.

Della Bradshaw



TELEPHONES PAST AND PRESENT: an engineer at Marlesham research laboratories in Suffolk, uses three-dimensional computer-aided design to create a new-style handset. In contrast, (right) Dr Thomas A. Watson, is pictured in 1837, holding a replica of the first telephone made by him for Alexander Graham Bell in June, 1875

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Telephone companies, particularly in the US

INTERNATIONAL TELECOMMUNICATIONS-5

ANY REFERENCE to satellites brings television to mind. The promotional activities of the companies competing with each other, and terrestrial broadcasts, to bring TV into living rooms makes it easy to overlook the importance of satellites as a telecommunications medium.

Satellites in geostationary orbit have become a vital element in communications for the carriage of voice, data, video and TV traffic around the world.

Remaining "stationary" at an altitude of 22,000 miles they are ideal where long distances or inhospitable terrain must be crossed. Often they provide communications with places where it would be uneconomic (or even impossible) to use cables or other means of connection.

On "thin" routes such as in the many islands of Indonesia there is no real alternative. Satellite ground stations, even in remote areas, bring communications with the capital, with other communities and with the rest of the world.

Permitting the country's minister of telecommunications, it to use a telecommunications network using low-cost, very-small-aperture-terminal (VSAT) technology provided by US company Scientific-Attelco. It will use 300 terminals but the number may grow to about 1,500 or even more when the network is fully implemented.

It will provide interactive data, video and voice communications to many remote and mountainous communities that have previously had limited telecommunications. The VSAT network will operate over Indonesia's Palapa satellite. Because the satellite's "footprint" covers neighbouring nations, these countries may be interested in networking with Indonesia so as to provide regional telecommunications.

The need for telecommunications cannot be too heavily stressed. Mr Richard Reynolds, managing director of GBC Pressley Telecommunications said at an international telecommunications conference in Singapore earlier this year that developing economies need advanced telecommunications if they are to attract the inward investment they require to grow.

This is because an international company, setting up in Nairobi or Shanghai, will want the same services that it has in Chicago, Birmingham or Frankfurt.

Furthermore "the availability of these services will also be needed on a national scale if the historic drift from rural

Adrian Morant on the importance of the satellite

Message from the sky



Andrea Caruso, head of Eutelsat, operates communications satellites such as Eutelsat II (right)



Andrea Caruso, head of Eutelsat, operates communications satellites such as Eutelsat II (right)

areas to ever-increasing cities is to be avoided in those countries with large populations," he said.

In addition, satellite ground stations with small aperture (diameter) dishes installed on the office roof or in the car park are being used increasingly to provide a business with a direct high capacity communications link.

Frequently the required capacity on such a service can be assumed to meet requirements that can vary on a day-by-day basis. For example, a multi-national could book capacity as to to operate a videoconferencing link between sites on opposite sides of the globe.

Satellites provide the ideal means of making these links because often the entire path is not encompassed end-to-end by cables providing the required wide bandwidth. According to the European Commission, the medium has a particularly promising future.

Mr Richard Coulman, general manager of GPT Video Systems, which claims to be the world's leading supplier of digital videoconferencing systems, said: "The benefits are indisputable. Travel can be dramatically reduced, not only saving the costs of the travel itself but cutting the amount of wasted time while executives are en route. Meetings can be arranged at short notice and people, not normally included in team discussions, can easily be called in to take part."

Although digital videoconferencing has been around since the early 1980s, technology has advanced dramatically allowing digital video information to be compressed into narrower and narrower bandwidths without loss of quality.

Satellites in geostationary orbit have become a vital element in communications

will provide air travellers with the ability to make telephone calls from aircraft using the Inmarsat (International Maritime Satellite Organisation) system.

It has started trial services on a British Airways Boeing 747 flying between London and New York. Operation via BTI's Skysatellite earth station at Goonhilly Downs in Cornwall will allow coverage to include north and South Atlantic, eastern North America, South America, Europe, Scandinavia, Africa and the Middle East.

Following an agreement with the telecommunication operators in Norway and Singapore it is geographically possible for the service to provide worldwide access.

Until the operational difficulties associated with contacting

an individual can be resolved satisfactorily, it will not be possible to offer a ground-to-air service. In the meantime, BTI is investigating the provision of a ground-to-air messaging service. This might take the form of telex and/or a type of radio paging. This latter could use small LCD displays in the aircraft cabin which could show a short message of the form: "AN OTHER CALL 4120 5678".

The message request would be telephoned to a UK operator in much the same way that a message is sent in the UK to a paging company for onward transmission to a message pager.

The Government has granted licences for specialised satellite services which will allow the transmission of information in the form of one-way data, voice and TV signals to any number of receiving stations within the UK via any suitable communications satellite.

This has opened the way for services tailored to meet specific business needs. Users will be able to take advantage of the high quality, reliability, ease of installation and low cost per mile of satellite communications.

For example, Direct Business Satellite Systems is an enterprise established to exploit these business opportunities.

Two substantial investors, Monotype and BSI are taking substantial minority stakes in the company, providing equity and loan capital as well as giving further support to establish the business as a going concern.

Its target segment is messages from any one sender to many recipients. Mr Adrian Norman, the company's managing director, pointed out that

most business messages are now handled digitally somewhere on their route and could be delivered electronically if their recipients had a suitable receiver.

Personal computers or TV sets with the addition of a cheap adaptor or "set-top-box" will serve as receivers for the signals which will be sent, alongside the TV programmes, via the ESB direct broadcast satellite.

In practice, messages will be sent via the telephone network to the transmission computer centre (TCC) where all the messages are stored, encrypted and coded. The message traffic is then sent to the satellite ground station for beaming up to the satellite which will re-transmit the messages in unused time intervals of broadcasting so that they can be received on the ground.

It plans to launch three services. These will be analogous to the telegram, facsimile and answer-phone and will use public-key encryption (see below) to ensure that the message is only available to the correct recipient.

The projected charges being such that DBSS's long-term goal is to compete with the mail. To use the service the sender pays the cost of the transmission but the recipient has to install the receiver.

Where the same message is to be sent to a number of destinations, it will be encrypted once with a message key. Then the message key is sent to each recipient individually using public key cryptography. The system could thus be an ideal way of sending the same information, such as stock market prices or even price list updates, to a number of users as DBSS's tariff will be especially advantageous for multiple destinations.

Hugo Dixon on the re-education of the telephone

Return of intelligence

WHEN telecommunications networks began in the last century, they were intelligent. At the heart of them sat human operators, whose job it was to help route calls from one destination to another.

If Mrs Jones wanted to speak to Dr Brown, but Dr Brown was not at his surgery, Miss Smith, the operator, would tell Mrs Jones what time to call back. Alternatively, she would route the call through to Dr Brown's home, telling Mrs Jones "After 4 pm, Dr Brown is always at home," or something of a similar nature.

This sort of service is not available on today's phone networks. As the volume of phone traffic has expanded, it is no longer sensible to have human operators processing all except for a tiny percentage of calls.

Even if it were possible to employ enough to cope with the volume, they would not be able to keep track of what everybody in the community was doing.

The trend has been to automate phone traffic. In the process networks have become dumb. Instead of connecting people who wish to speak to each other, they connect destinations. If the person is not there, that is just too bad.

More recently there has been a move to reintroduce intelligent intelligent telecommunications networks by means of a new architecture for the systems and sophisticated software. The concept is called "intelligent networks".

Intelligent networks will provide a host of new features, when they are finally implemented, which will probably take at least a decade even in industrialised countries. The new features fall into four main categories.

To send an encrypted message, one looks up the addressee's key in a freely accessible directory, akin to a telephone directory, and uses it to generate the cyphertext. The user, being the only one with the correct key, will be the only one able to read that message.

Where the same message is to be sent to a number of destinations, it will be encrypted once with a message key. Then the message key is sent to each recipient individually using public key cryptography. This system could thus be an ideal way of sending the same information, such as stock market prices or even price list updates, to a number of users as DBSS's tariff will be especially advantageous for multiple destinations.

Second, alternative billing. Dumb networks charge the number which originates the calls. INs could allow people to make calls from one number and be charged on a different number. This already happens with freefone services, an embryonic IN service which charges the company receiving the call rather than the person making it. Fully developed IN services would allow people to charge their home numbers for personal calls made from the office and vice versa.

Third, call barring. At present, mechanisms for preventing people using the phone for calling certain destinations – for example, stopping young children spending thousands of pounds on chatlines – are rather crude. INs would allow the subscriber to specify which destinations could be called from his or her phone, and to vary these specifications from person to person.

Fourth, virtual private networks. At present, if a large corporation wants to link its offices with a special telecoms network, it has to lease lines from the public telecoms operator. It can then tailor the networks to its own needs. VPNs would offer all the services companies expect from private networks – such as short dialling and call diversions – but over the public networks.

Users would have the impression that they were speaking to each other over the company's private networks. The advantage is that they would not have the hassle of having to maintain their own networks.

In theory, all these sophisticated features could be provided in a number of different ways. The IN concept, however, relates to a specific concept for providing them. The essential element is that the intelligence is located in centralised computerised databases rather than residing on the telephone exchanges.

The reason for this is that it is then only necessary to produce one database for each service instead of writing new code.

software for each exchange in the network. The latter approach is complex, expensive and time-consuming.

Two further characteristics help define INs. First, a fast high-capacity signalling system. This allows the exchanges to communicate effectively with the databases, when they are told how to route calls or change for them. If the normal slow signalling system was used, it would take so long for the message to get back from the databases that the person making the call would probably have hung up.

Second, open interfaces between the various elements of the system – especially between the telecoms equipment and the databases. This is essential if products from different manufacturers are to work together properly. It is, however, one of the trickiest aspects of INs.

The advantages of INs to the consumer could be immense. Instead of having to make, in some cases, dozens of phone calls before being able to track somebody down, INs will mean there are more first-time customers. Businesses and professional organisations which need to be in contact with their customers will not lose business by being out of touch.

Ptcs will not only need to meet the threat of other Ptcs, they will also need to compete against private operators, such as IBM and EDS, and stem the drift of large corporate traffic onto private networks. In doing this, INs give them an armoury of weapons, the most important of which are probably virtual private networks because these compete directly with the offerings of the private operators.

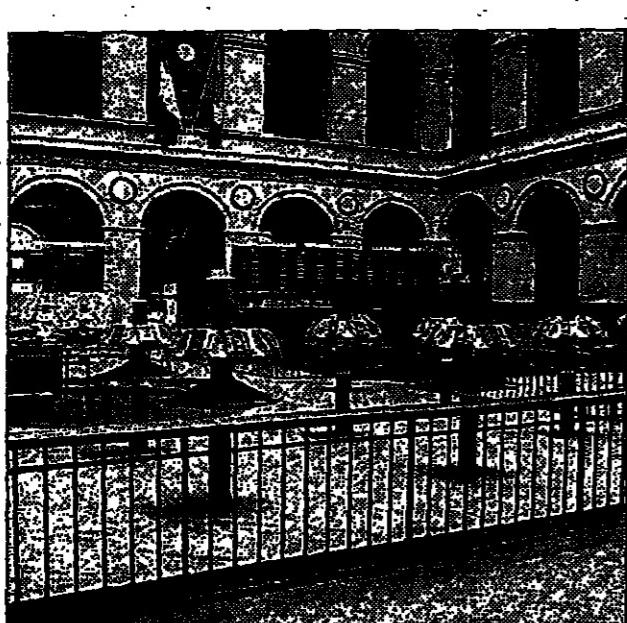
PTCs also expect to benefit from INs through getting access to better quality, cheaper equipment for their infrastructures.

As such, INs pose a threat to the established telecoms manufacturers. Most have little expertise in creating and managing large databases. Unless they can either grow this expertise internally or acquire it through mergers, they are in danger of losing an important slice of their market. By contrast, INs are the first real opportunity for computer companies such as IBM, Digital and Tandem to get into the heart of the networks.

Where do powerful ideas in communications come from?

NORTHERN TELECOM

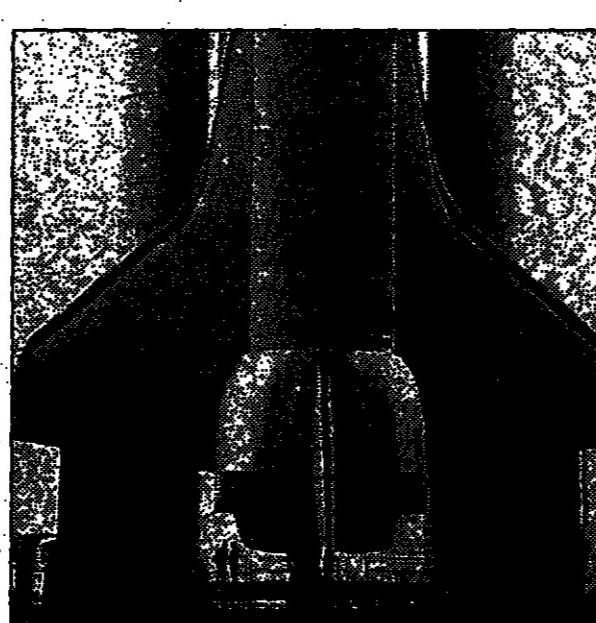
THE POWER BEHIND COMMUNICATIONS



Paris Bourse – A major European stock exchange.

When the Paris Bourse decided to expand its services to meet growing demand in France, they chose Northern Telecom to supply their digital voice and data communications network.

With this system, the brokers, dealers and agents trading on the Exchange can give their customers rapid access to accurate and up to date information and maintain constant contact with shareholders, banks and stockmarkets worldwide.



The thrust behind NASA's data network.

To carry the vast amount of data from its computer network to desktops throughout the Ames Research Center, NASA selected a Northern Telecom integrated network system.

It links the widest variety of terminals of any PBX. It opens access to the local network of supercomputers, mainframes and minicomputers. It even reaches data on NASA's nationwide computer network.

In Canada we've been setting the pace for over 100 years.

In the USA we're an industry leader.

In Japan we're the only foreign switching supplier to the public telephone network.

And in Europe, we're the market leader in digital PBX and packet switching, working with national partners to build a European community.

In fact, we're at the forefront in exploiting digital technology. And now we're developing this technology to take telecommunications into the next century.

Northern Telecom. The power behind communications across 5 continents and in over 60 countries.



The world's largest telephone company.

When Japan's enormous public telephone network needed new community dial offices, they wanted the most advanced equipment available.

That's why they called on Northern Telecom – the corporation that has built the largest base of digital switching systems in service around the world.



SW.LET – the world's largest financial services network.

When the Society for Worldwide Interbank Financial Telecommunication decided to move to packet switching technology, it turned to Northern Telecom.

On completion of its enhanced network in 1990-1991, no fewer than 2,600 financial institutions in over 60 countries will be constantly linked. And every day, over one million messages will pass between them.

nt northern telecom

INTERNATIONAL TELECOMMUNICATIONS-6

IN THE more developed markets, the penetration of mobile communications already represents about five per cent of the population and some PTTs (post and telecommunications authorities) are predicting that, in the near term, a significant percentage of their income could be derived from mobile operations.

The indications are that growth will continue and market projections are suggesting 15 to 20 per cent penetration within ten years. The result of this is that mobile system technology is faced with two major challenges: meeting the demand for current services; and the need to establish more effective and efficient systems to meet the demand for advanced services.

The UK is in the forefront of these developments. As well as being heavily involved in the next generation pan-European cellular and Telepoint, Lord Young announced plans last month for Personal Communications Networks (PCNs) which will provide innovative communications into the 1990s.

While there are many means of communications, it is cellular radio which has had the most profound effect on personal liberty. It brings with it a freedom to communicate and to remain in contact with others in a manner not previously possible.

In Scandinavia, then the UK, and now the rest of Europe, these benefits have been recognised. This is the reason for the rapid growth in the numbers of subscribers.

The cellular penetration in Norway last year was over 30 per 1,000 inhabitants, with the other Scandinavian countries all having over 15.5 per 1,000. The equivalent figure for the UK is 6.5 - and still growing - whereas in the US, after some five years of operation, the penetration is only about 7 subscribers per 1,000.

Today's success is also a source of problems as the capacity of existing systems will be saturated and quality of service will suffer - unfortunately, already a fact of life at the busy hour on some systems in high activity areas.

This success also ensures that there is the potential market for other innovative means of communication. Thoughts are already moving towards the long-term goal of a Global Mobile Phone (GMP). However, in view of the length of time that it takes to derive and refine the concept, as well as reach international agreement - and then bring a product to market - this is a very

New ways to keep in touch on the move

long-term project which will probably not come to fruition until the late 1990s.

In the longer term, GMP will probably be needed. Not only is there an increasing amount of international travel and, without GMP, some travellers would have to lease local equipment wherever he went.

Before then, the pan-European digital cellular radio system, agreed by the European telecommunications operators, will make it possible for a user to maintain contact wherever he is in Europe using just one telephone.

This facility, also known as GSM (Groupe Spéciale Mobile), from the committee set up to study the options and to arrive at a technical specification, will also enable European manufacturers to obtain the economies of scale so necessary for low-cost manufacture when it is implemented in the 1990s.

Operators in 17 countries have signed an agreement to implement GSM in their coun-

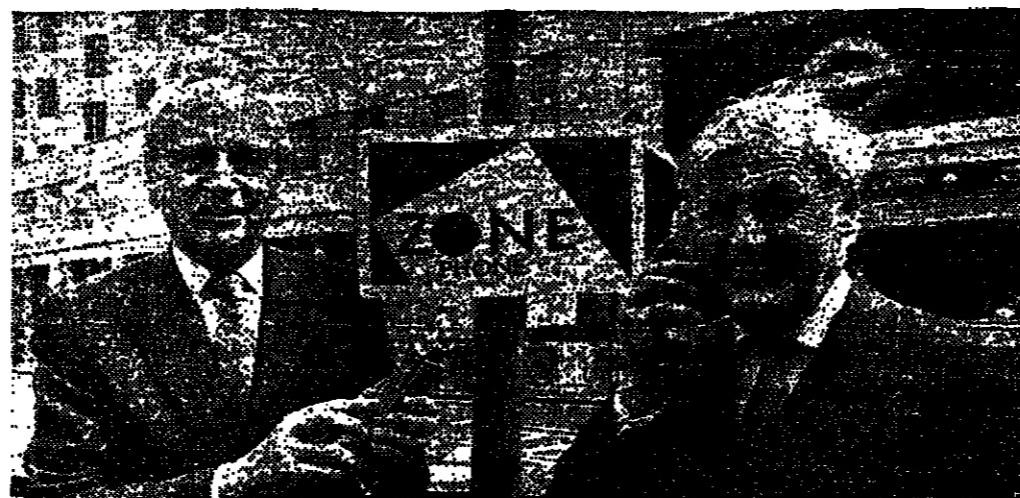
Researchers are already moving towards the long-term goal of a global mobile phone system, reports Adrian Morant

tries.

When fully operational in the mid-1990s, it will be possible to use the same car telephone as one travels across the continent. The European operators have already published projected GSM investment figures which indicate that a total of Ecu 700m (around £500m) will be spent each year through the 1990s.

At the same time, the projected total European market for systems and terminals is estimated to exceed Ecu 20bn to 25bn over the 12 year period to 2000. This is an average of over Ecu 2bn a year.

The economies of scale



Lord Young (left) intends that all personal communications network in the UK should operate to a common standard. He is seen here with Sir Derek Alun-Jones, chairman of Ferranti, with the new Zonephone Telepoint service in London.

According to a study carried out on behalf of PA Consulting Group for the European Community, there are about 32 million workers in Europe who may be regarded as the potential market for GSM.

The study forecast that by 1995 the current analogue cellular systems such as Cellnet and Vodafone will have been overtaken by GSM and that, by the turn of the century, it will occupy a very large proportion of the over 14m subscribers.

The underlying trend will no doubt be right even if, in a race of fast-changing technology, the detail may be wrong.

While the majority of users will not need a cellular phone while traversing Europe, it will be of value to a proportion of the business community, as well as long-distance coach and lorry drivers and others who are frequently out of contact.

Furthermore, the pan-European digital cellular system will provide the continued capacity for growth. In addition it is an advanced digital system. Benefits that accrue from this include higher speech quality, more secure speech because the transmission will be encrypted, and faster call set-up times.

This latter facility will reduce the time taken between dialling a number and the telephone ringing. While this may seem to be a minor point at present, it is one that will assume greater significance in years to come. This is because,

with the digitalisation of the public telephone network, users will come to accept fast call set-up.

However, until GSM arrives, cellular communications are somewhat fragmented as, with the exception of Scandinavia, the current analogue systems used in the various European countries are incompatible with one another.

Each European country will have its own time scale for the introduction of GSM. Some will also introduce competition. For example, in Germany the Bundespost will operate one network while the operator for the competitive private network has not been selected yet from the various bidders.

One of the consortia consists of car manufacturer, BMW; as well as Veba, the German industrial group with interests in power generation and petrochemicals; BellSouth, one of the regional telecommunications operating companies in the US; Racal Telecom; and Cofira, the operator of the only analogue cellular network in France. Racal is also a member of the Cofira consortium in France.

In the UK, the existing cellular operators, Vodafone and Cellnet, will operate GSM. With a combined user base of around 600,000 together they now have the largest cellular subscriber base in Europe. They have overtaken the over half-million subscribers of the Nordic Mobile Telephone sys-

tem (NMT) and are growing at a faster pace. Their vast amount of experience in developing, operating and marketing cellular systems will be a major asset internationally.

In addition to those

The drive towards miniaturisation is accelerating

operations above, Racal has also involved in cellular operations in both Malta and Greece while British Telecom, 60 per cent owner of Cellnet, has recently purchased some 20 per cent of the equity of McCaw Cellular Communications for \$1.37bn.

As users are unable to receive incoming calls it is considered by many to be the poor man's cellular. While there may be some truth in this, it really caters for those who just need to make calls rather than receive them.

Furthermore, with the objective of not losing any of this impetus in mobile communications, the UK Government announced last month that a Mercury/Cable and Wireless consortium will receive a licence "subject to the putting forward acceptable proposals" to operate a Personal Communications Network (PCN) of the form mooted in the "Phones on the Move" discussion document on Personal Communications in the 1990s, which was published in January by the Department of Trade and Industry.

This move towards true portability is already well under way with hand portable cellular phones now on the market

This is a long term investment, made because BT is anticipating the globalisation of telecommunications and also wishes to reinforce development of those businesses that are independent of the regulated UK markets so as to help protect BT from any slowdown in the UK market.

Lord Young stated that he intended to identify one, or possibly two, other prospective licensees of PCNs by the end of the year.

He intends that all the PCNs should operate according to a common technical standard in order to ensure competition between the operators.

The underlying "micro-cellular" concept would employ radio base stations with small service areas so that this would allow the use of very small and light pocket handsets, capable

offering vastly improved performance, especially in terms of battery life, over previous products.

For example, Motorola's recently launched 9800X personal telephone gives up to 75 minutes' continuous talk time or 20 hours' standby, and weighs less than 350gm. With the slim-line battery attached, instead of the standard one, the weight is only 305gm. This weight reduction, while achieved at the expense of operating time, results in a really "handy" product.

Key factors in this drive to miniaturisation are improvements in battery and semiconductor technologies. Phillips Components of Eindhoven has announced a set of semiconductor chips cellular radios which reduces the number of components required, and so reduces size and weight, as well as claiming to have an appreciably reduced power consumption.

Targed at the next generation of pocket-size, battery-powered cellular handsets, as well as traditional mobile applications, it is claimed to be the first chip set on the market geared to the specialised needs of cellular radiotransceivers.

Commenting on the products, on behalf of the Telecom Division of Philips Telecommunications and Data Systems, Mr Philip Timmarsh, national cellular sales manager, said that "this is the first high integration chip set for cellular phones. Its compact, power-saving design will not only enable manufacturers to introduce true pocket-sized portables but will also stimulate the market for cellular phones, overall."

This statement is supported by the market researchers at Dataquest who estimate that UK cellular subscribers will increase from around 400,000 in 1988 to 1.2m in 1992.

of long periods of operation without the need to recharge the batteries.

The indications are that

these pocket radio-telephones

will be the battleground for the public mobile radio telephone markets in the 1990s.

The further implication being that the cellular radio operators will be shifting much of their focus away from car phones as such,

towards pocket radio-telephones in order to sustain their growth through to the year 2000 and beyond.

This move towards true portability is already well under way with hand portable cellular phones now on the market

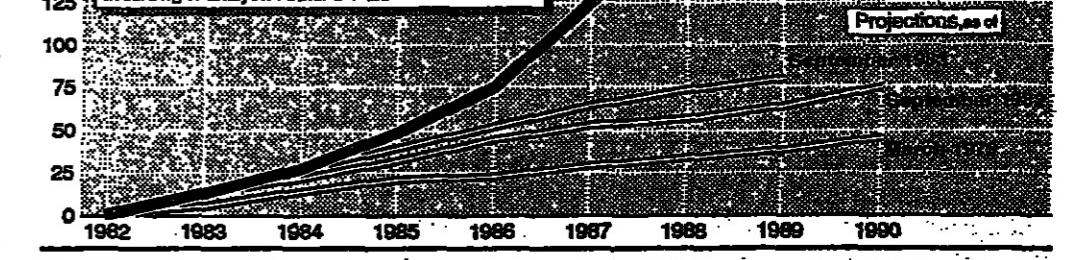
Paging and private mobile radio systems

More opportunities for business

Cellular systems in Sweden

Thousands subscribers to NMT

Sweden started cellular first (1981) and has the most experience but still regularly underestimate demand, according to analysts Arthur D Little



from wider choices and price competition. The Department of Trade and Industry is actively promoting the use of MPT 1327 and interest is being shown by a number of other countries including France, the Netherlands, Denmark and West Germany.

In the case of the latter ZVEI (the German electrical industry association) is translating the specification with the aim of eventual adoption as a national standard. While PMR provides two-way communications, the importance of the one-way radio pagers is frequently overlooked.

Pagers are relatively low in cost and range in facilities from the simple "bleep" through to more sophisticated versions providing full alpha-numeric messages.

In the UK the various operators provide a range of service area coverages for a commercial fee.

Mr Daniel Nabarro, chairman of Inter-City Paging, is of the opinion that, despite the fact that the UK radio-paging is expected to grow by 25 per cent this year, there are very many people who fail to appreciate how paging could benefit them.

He points out that many potential users assume that a pager is only of value when the user is called several times a day. In fact, just one message a week - or even a month, if the message is critical - may more than justify its use.

There are even those, on-call for emergencies, who hope their pager will never bleep. Common goals are appearing with the UHF Europe paging initiative under way across Europe. Alphapage is being constructed in France and Cityram Germany. While only intended to cover major communications, they are both effectively national systems as they are under the umbrella of the national PTTs.

In addition, a similar system is under way in Italy and there is the possibility that Spain and Austria might follow suit and implement corresponding systems. A British consortium of all the major paging companies, with the exception of Mercury, will also construct a system operating on the same UHF frequency to cover London and the south-east.

Together, they will permit city-to-city roaming across the various countries. Called Europage, it is expected to be operational from the beginning of 1990. It is believed that Racal Telecom will be the prime contractor using transmitters supplied by Paging Systems, the sister company of Inter-City.

Continued on page 7

IS THERE A COMMUNICATIONS COMPANY WHO ARE ALREADY TALKING EUROPE?

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Herr A. Müller
Martin Dawes Communications, West Germany
Osterholzer Str. 7, 2000 Kiel 50
Tel: 0411 17 10 35 Fax: 0411 17 50 65

National One points out: "It isn't to do with high technology - it's to do with low cost." The two national operators are Band 3 Radio which consists of a consortium of Philips, Digital Mobile Communications, Racal and Securicor and GEC's National One. They are rolling out their networks to cover the country. Under the terms of their licences, they are required to cover two-thirds of the country geographically, by 1991 - an area encompassing at least 80 per cent of the population. However, the target of the latter is to achieve this coverage by the end of this year, while the former already covers 60 per cent of the population and has over 10,000 subscribers.

In addition, eleven regional licences have been awarded by the Government. Many service providers are regionally based (even for a national operator) and so provide users with the choice of dealing either with businesses local to their operations or with national communications specialists.

Trunking makes more effective use of the available channels by grouping them together. Then, when a user wishes to make a call, he is allocated the next free channel.

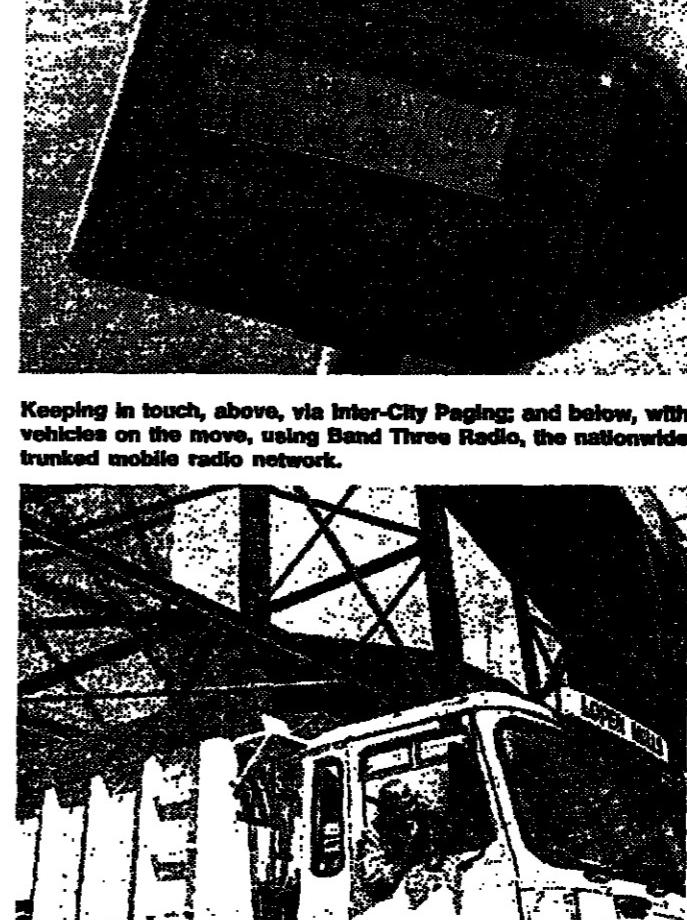
As soon as the call ends, that channel is returned to the pool ready for re-use. This avoids the congestion that occurs on some channels while others are idle when channels are dedicated to specific users.

Overall, trunking allows a group of channels to carry proportionately more traffic than the same number of channels used separately - the result being that channel availability is greatly improved.

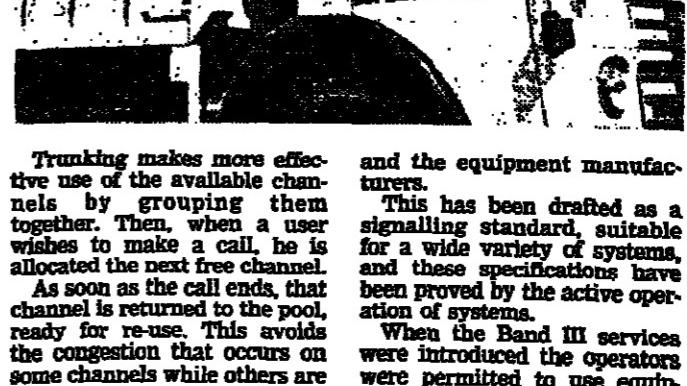
The efficiency of such a system relies on sophisticated signalling protocols. In the UK, the overall operational standard, MPT 1327, is a collaborative effort between the Department of Trade and Industry, all the Band III network operators

and the equipment manufacturers.

This will benefit manufacturers in terms of economies of scale, while the user will gain



Keeping in touch, above, via Inter-City Paging; and below, with vehicles on the move, using Band Three Radio, the nationwide trunked mobile radio network.



Keeping in touch, above, via Inter-City Paging; and below, with vehicles on the move, using Band Three Radio, the nationwide trunked mobile radio network.

INTERNATIONAL TELECOMMUNICATIONS-7

IN THE early 1980s, Mr Kenneth Baker, the then Minister for Information Technology in Britain, would talk about cable television in grandiose terms and, in particular, its role in creating the wired city of the future.

New television channels, based firmly on entertainment, were seen as the engine that would drive forward and fund advanced telecommunications services.

In many ways, it was a futuristic fantasy that, until recently, seemed laughable as cable operators faced with a slow growth of the market concentrated on survival and installing basic cable equipment rather than worrying about high technology or wired cities.

Slowly, all that is beginning to change and cable operators are beginning to take telecommunications seriously again as an integral part of their business with the potential to create serious streams of revenue.

The change in perception of cable as a business, and telecommunications within it, despite all the publicity given to satellite television, can be summed up quite simply - the Americans are coming.

Immensely profitable US cable companies have identified the UK as a key overseas market. But among American cable operators, such as United Cable and Jones Intercable, there has been an entirely different class of investors: the US regional telephone companies. "The children of Ma Bell" - in the US, they are at present

Raymond Snoddy examines the cable business

Changing perceptions

ent forbidden from running cable television companies in addition to their existing telephone businesses.

There is no such prohibition in the UK. The enormous US telephone companies are coming to Britain primarily to use cable to offer an alternative local telephone service to British Telecom, but also to gain experience of cable television in case of further deregulation in the US that would allow them to become cable operators there too.

Pacific Telesis (Pactel) is involved in a joint venture with Jones to run East London Telecommunications, the Docklands cable franchise which has now installed its first 40 business telephone lines and which plans to operate its first 100 domestic telephone lines in the autumn.

The joint venture partners have also been awarded a franchise covering the London boroughs of Redbridge, Barking, Dagenham and Bexley and has also applied for the Waltham Forest franchise. Although the US owners are moving cautiously it is the eventual aim to bring cable telephony to those areas.

US West, another part of the former Bell empire, is even more active in the UK. The company is a shareholder in Windsor Television

one of the original 11 cable franchises awarded in 1983 and which is demonstrating that telecommunications has the potential to become a serious business for cable operators.

So far, more than 500 business lines have been installed in the Windsor franchise area. US West is, however, the majority shareholder in the

UK cable operators are beginning to take telecommunications seriously

Cable Corporation, holders of the Birmingham franchise, one of the largest cable franchises in Europe with 460,000 homes.

From September, the company will be installing cable in Birmingham and at the same time installing telecommunications capacity.

US West is also involved with United Cable to provide telecommunications services in its south London franchises covering Croydon, and the boroughs of Sutton, Kingston, Merton and Richmond.

Mr Jim Dovey, chief executive of United Cable Television International, sees the business area of Croydon as an attractive opportunity. In addition,

three other US telephone companies Bell South, South West Bell and Nynex, the New York phone company, are all believed to be exploring cable and related telecommunications opportunities in the UK.

Partly stimulated by the US investment interest, there has been a remarkable burst of activity from the Cable Authority, the industry regulatory body.

Although there are only 10 modern cable franchises in operation and a modest number of cable subscribers - 20,000 on both old and new systems - no less than 41 franchises have now been awarded covering a total of 4.8m homes.

A further 21 franchises have also been awarded given a grand total of 9.2m homes that could be in theory be cabled, for both television and telecommunications, if all the systems are built.

Mr Roger Marshall, a director of East London Telecommunications, believes that cable could create viable local telephone companies particularly if the industry is given the right to operate its own switching between franchises following the 1990 review of the BT/Mercury duopoly.

At the moment, companies such as Windsor and ELT connect to the national system through Mercury Communications.

"We see it as being very big business," Mr Halfhead said.



Optical fibre cable being laid in the Lake District in Cumbria.



Telepoint technology: a new concept in cordless telephones, allowing users in Britain to make calls within 100 metres of public base stations.

Mobile systems

Continued from page 6
The memorandum of understanding having been signed between Europe (Air Call, British Telecom, Digital Mobile Communications, Inter-City, Millicom and Racal) and operators in France, Germany and Italy, it is now expected that the commercial agreement will be signed by all the parties.

There is already substantial pent-up demand for this system which is essentially an interim system and is expected to be loaded with subscribers within about five years.

It is a "follow-me" system so that callers would still telephone the normal number of message, irrespective of where the user is currently located.

Further downstream will be Ernes, the European digital paging system. Thirteen member-countries of CEPT, the organisation of the European telecom authorities, will define and then consider a paging network operating at VHF - the intention being to allow roaming across the service-areas in all three countries, once the specifications have been agreed (by 1990) and construction, co-incidentally, with the

Costly calls

CELLULAR telephone users in the UK often have to contend with costly call charges and fees, plus "severe congestion in built-up areas, interference and disconnections," claims a new report.

While telephone prices have plummeted, with buyers being offered in excess of 50 per cent off the recommended retail price on many models, the costs of running a cellular phone, as opposed to buying one, have spiralled, says the report in *What to Buy for Business*.

"The cost of making cellular phone calls has always been high - 33p a minute at peak time - but many dealers are now trying to take up some of the strain of operating in such a competitive marketplace by jacking-up call charges and the network connection and subscription fees," comments Julian Lloyd, the magazine's editor.

A REVOLUTIONARY NEW PHONE SYSTEM. Since mobile phones have been around for some time, you may feel there's nothing new to hear. But when three major voices in the telecommunications business get together to create a new mobile phone system, it's hardly surprising everyone wants a sneak preview. Motorola are the world's largest cellphone manufacturer and suppliers of the Celinet system. Mercury Communications runs Europe's first all-digital system which is also Britain's first competitive network and Shaye Communications have developed the technology which makes Mercury Callpoint a reality. The expertise of these three companies is set to make this affordable, compact phone system Britain's greatest talking point.

A sneak preview of Britain's new talking point



THE NETWORK. A system of base stations (or Callpoints) marked by distinctive blue and white triangles, will appear in highly visible sites all around the country. All you have to do is be within 200 metres of a Callpoint sign and dial on an approved handset. The slim, lightweight handset is no bigger than an ordinary pocket calculator, yet it will connect the user through a comprehensive national network to anyone, anywhere in the world, at anytime.

MAKE YOUR BUSINESS A TALKING POINT. At present, we are talking to a number of large companies who feel they can provide key sites suited to the needs of Mercury Callpoint. If you'd like more inside information about Britain's greatest talking point, call Mercury Callpoint on 0276 20915.



MERCURY CALLPOINT - BRITAIN'S GREATEST TALKING POINT

A USER FRIENDLY SYSTEM. With the cost of handsets and use of the network both much lower than other mobile phone systems, Mercury Callpoint is the ideal tool for people on the move.

And with base stations in convenient sites, you'll be able to spend more time doing business instead of searching for phone boxes and change.

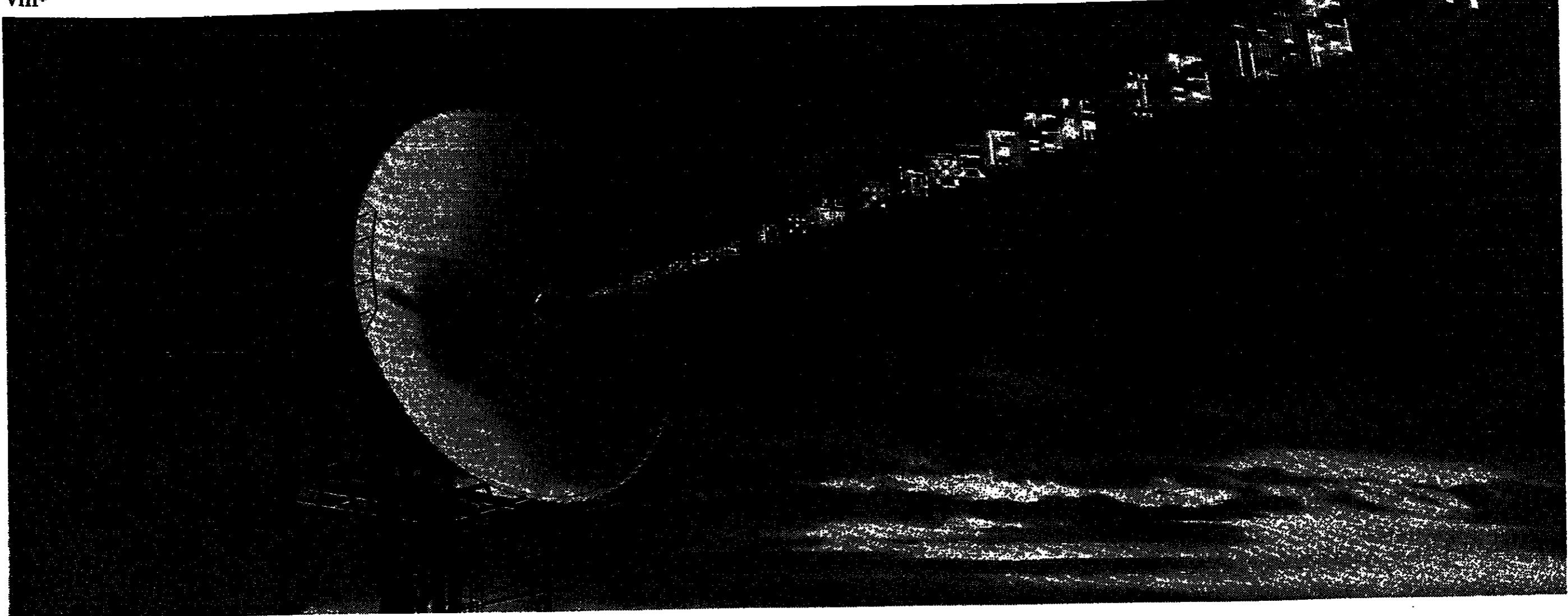


WHERE WILL CALLPOINT BE? In a word, everywhere. Key sites include travel centres such as stations, airports and motorway service areas, as well as in high streets, supermarkets, banks and

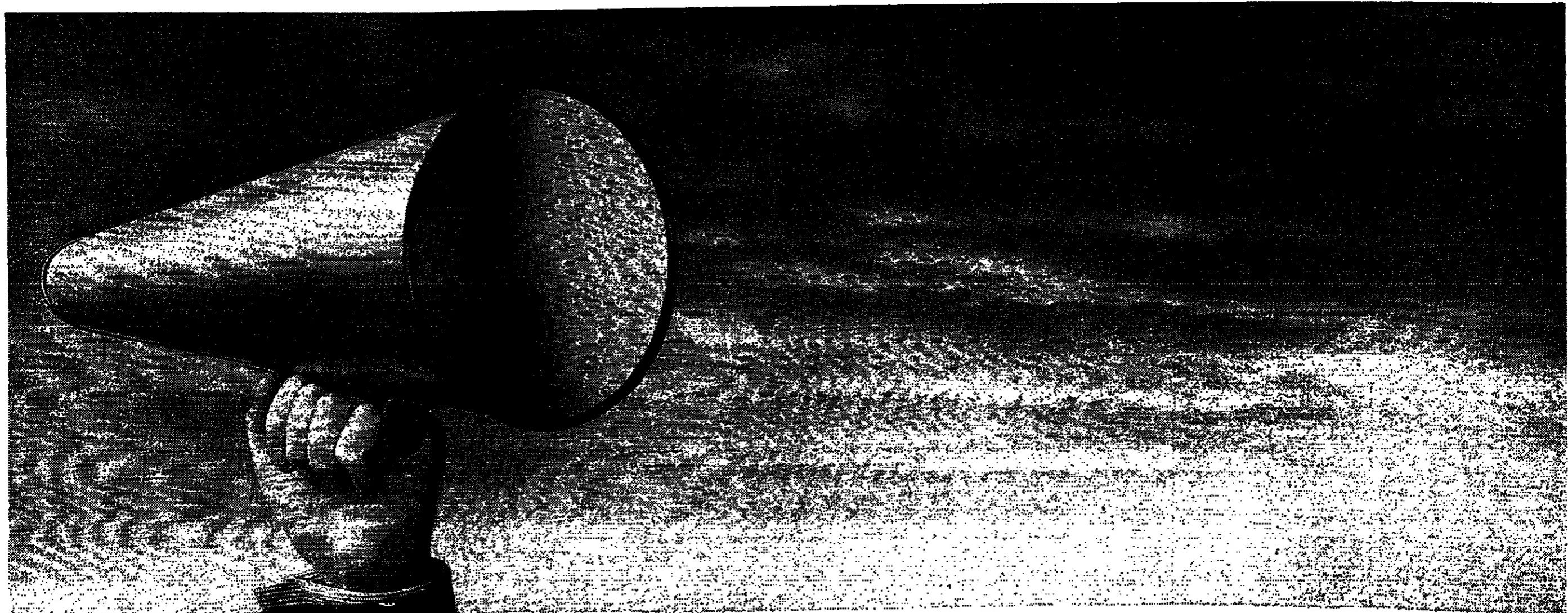
pubs. Handsets will be widely available from both specialist dealers and high street stores. The launch of the network later this year will coincide with a promotional campaign which will

ensure Mercury Callpoint really is Britain's greatest talking point.





Without the
language of business,
how do you
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In the bustling hurly-burly of business, how can you attract attention? More noise perhaps? Then again, there's always someone who shouts louder.

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This is merely a taste of what can be achieved through our phone and data networks. A system that, together with our satellite and microwave transmission network, allows you to contact your customers almost anywhere in the world.

Why not find out more about the language of business? For your action pack containing our catalogue and Business programmes, contact us on the number below. Achieving success in a crowded and noisy market place can be extremely tough.

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INTERNATIONAL TELECOMMUNICATIONS-10

LOWER OPERATIONAL costs, better security of information, more reliable, faster communications links and tighter management control, are reasons put forward for installing private communications networks.

There is no doubt that the 1990s will be the age of integrated networks that support not only voice, data and graphics communications but fax, video-conferencing, electronic messaging and mail, voice messaging and voice mail as well as paging, security systems and so on.

Taking the two main methods of communications, there is expected to be substantial market growth over the next few years. According to market researchers Dataquest, for example, the European telecommunications industry was worth \$67.4m in 1987 but will be worth \$105.5m by 1992. The European data-communications market, worth \$2.5m in 1987 will be worth \$5.2m by 1992.

A number of initiatives are under way to provide advanced telecommunications on an international basis that will add momentum to the industry as it moves towards the end of the 1990s.

One such programme, RACE (Research in Advanced Communications in Europe) aims to build a new European telecommunications infrastructure with the objective of bringing every type of communications medium, including home banking and interactive distance learning to the masses by 1995.

The biggest direction the market has taken is from analogue to digital circuits, as can be gauged by figures supplied by Dataquest showing that the number of KiloStream circuits in use is expected to grow from 75,000 this year to 250,000 in 1993 while MegaStream will grow from 10,000 this year to 60,000 in 1993. The UK dominates the private multiplexer (MUX) and X.25 market in Europe with over 40% share.

According to Mr. Mark Davies, business manager of Digital Network Systems at CASE, "In the last 12 months we have witnessed a definite shift in two directions. One is a migration from analogue to digital circuits, the other is the parallel move towards putting data as well as voice on the network."

"The philosophy now tends to be that the private network is cost-justified on voice with the added benefit of getting a free data network."

the purpose of offering communication products for private networks. The activities will cover digital PABX switches, digital telephones, voice messaging and related products used to carry voice and data in and between office buildings.

In May this year, Ericsson Business Communications announced that it was moving into the area of corporate integrated voice and data networks. Gandalf Digital Communications has recently announced a number of private network developments and enhancements as has Cheshire-keef Telecommunications.

Liberalisation of the communications network is also bringing competition from a number of other areas, as Mr. Davies explains: "At the moment, the only network services on a national basis is through BT, Mercury and Kingston (Hull), but there is an interesting move at local level with cable television companies starting to offer access to Mercury."

"Obviously Mercury is in a better position in this respect than BT because its fibre optic national network is already 100% digital. However, unlike BT, they cannot provide connections to houses and offices, whereas the cable companies can but don't have the network."

"If you're already using KiloStream for data traffic, then it makes even more sense in terms of cost to install a MegaStream to cope with the increased traffic."

The UK is not getting away from the fact that private networks are costly, and multiplexers can cost anything from £20,000 to £50,000.

A MegaStream circuit costs



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Money is the main catalyst for change, says Julie Harnett

Era of private integrated networks



Delays reduced

A PRIVATE communications network, installed in less than three weeks, is helping to cut delays for British holidaymakers. The system, pictured left, links air-traffic flow-control centres in London, Madrid, Paris, Frankfurt and Rome. Supervisors at each centre can now contact each other, either individually or in conference, at the touch of a button, to discuss overall traffic management. The network from British Telecom International, is centred on the Civil Aviation Authority's private exchange system at West Drayton.

Will there be a role for ISDN

in the business community with many corporations making or planning huge investments in private communications networks?

Mr Davies believes that most organisations will go for a hybrid, mix and match approach. "It is a fallacy that KiloStream and MegaStream type circuits will disappear; leased lines will still be available, except that the connections will run across the ISDN. Organisations will still have their digital backbone networks and where they cannot justify a dedicated 64k link, then they will be able to use an ISDN connection."

The main point, however, is what ever solution is chosen, the corporate network will be under the control of the communications manager who will be able to make proper selection decisions based on cost and potential cost-savings.

Nevertheless, even with the installation of private integrated networks gathering momentum, there is still a "very cautious approach to complete integration," says Mr. Northcott.

"It is rolling forward at the transmission level, using MegaStream services with multiplexers to handle voice and data with equal facility. But when it comes to total integration the question is who wants to be first; and the answer is

nobody, unless there is a competitive advantage and you have very user-friendly interfaces."

In Mr Northcott's view, integrated networks will not take off as cellular radio did. "That was a solution to a ready-made problem. That is not the case with integrated networks."

What we are looking at with private networks is perhaps a refinement, a more elegant way of doing what people have already been doing.

"Even when you talk about integration over ISDN you have got to think about user-friendly interfaces. If I have a 2B plus D (two 64k circuits and a 16K signalling channel) to my desk, if it is difficult to access the facilities I will not use it."

It may well be that DPNS (digital, private network signalling systems) will replace many of the analogue circuits in private use during the 1990s.

It is a standard, developed by a group of UK FABX suppliers, led by BT, to overcome the lack of internationally defined standards for ISDN-type services in corporate networks and allows PABX manufacturers to offer varying levels of supplementary services such as fast call set-up, call back, diversion and transfer over the

"Despite the momentum for change, there is still a very cautious approach to complete integration"

private network.

On July 7 this year, GPT and Phillips Business Systems announced that functional tests of such services carried out at the GPT laboratories in Nottingham on the ISDN and Sopho-S products had proved successful.

"It is

successful.

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Japan's premier international communications carrier, has a message for you.

After more than a decade of research and development, high speed communication in any medium is now possible on a global scale.

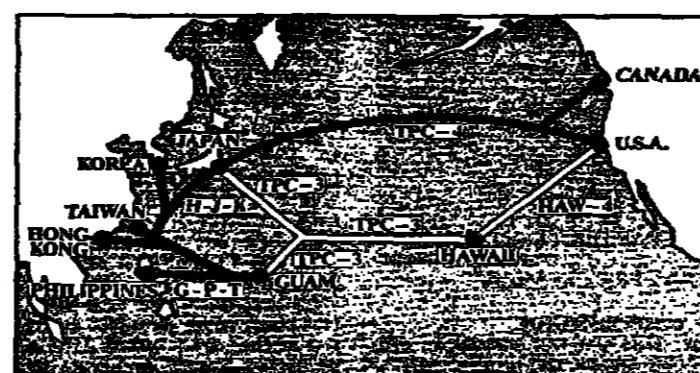
The recent inauguration of TPC-3/HAW-4, a trans-Pacific cable that's the result of a joint project between 30 corporations headed up by KDD and AT&T, means that the three major economic centres – the UK, USA and Japan – are now linked by optical-fibre cable, the fastest means of communication yet developed.

Technology in depth

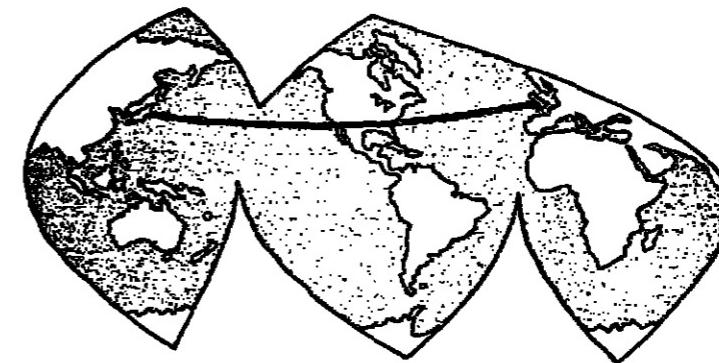
Laid by KDD's own ship, the "KDD Maru", the cable is in itself a major feat of engineering.

circuit for London businesses, enabling them to communicate with Tokyo via optical-fibre cable.

The advantages – universally high transmission quality, negligible time lag and enhanced capacity – make communicating with Tokyo as easy as an inter-departmental conversation.



in this field that KDD is setting the pace for everyone in the communications business.



A room of your own

There's our joint TELEHOUSE project. Soon to be completed, TELEHOUSE EUROPE will offer UK and European businesses all the facilities for communication and computer equipment – without the problems associated with setting up and running your own in-house Information Technology centre.

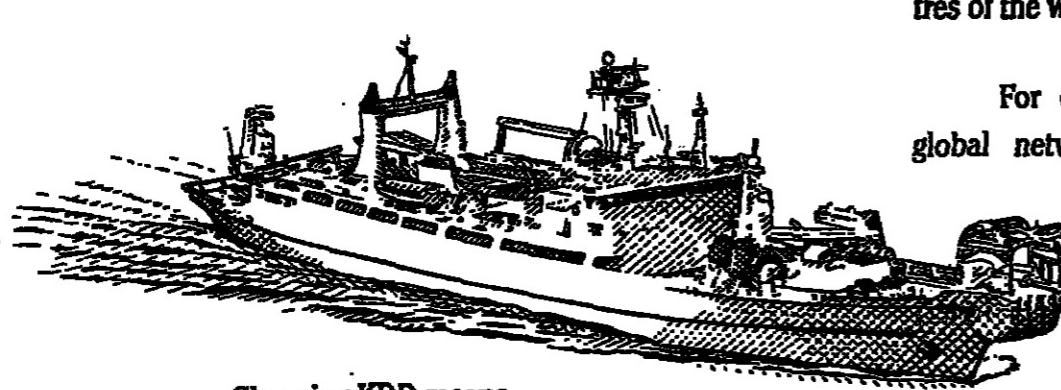
The World is getting smaller

(Take our digitally-encoded word for it)

reaching a depth of over 8,000 metres – a fact that warrants an entry in the Guinness Book of Records.

Its completion is particularly good news for international businesses – especially for businesses whose very existence depends on reliable, efficient communications with the rest of the world.

Like yours, perhaps.



Choosing KDD means choosing reliability, because in addition to optical-fibre cable we can also provide state-of-the-art satellite communications. The result is an infrastructure that offers unique diversity and reliability, and ensures that all your global communications requirements are met.

Not-so-far East

"The Tokyo Connection", a joint project with British Telecom, offers a high-speed digital leased

The new international language

Whatever the means of communication – be it telephone, fax, video, or even computer data – the ISDN (Integrated Services Digital Networks) service developed by KDD, AT&T and BT can connect you immediately with associates in the major business centres of the world.

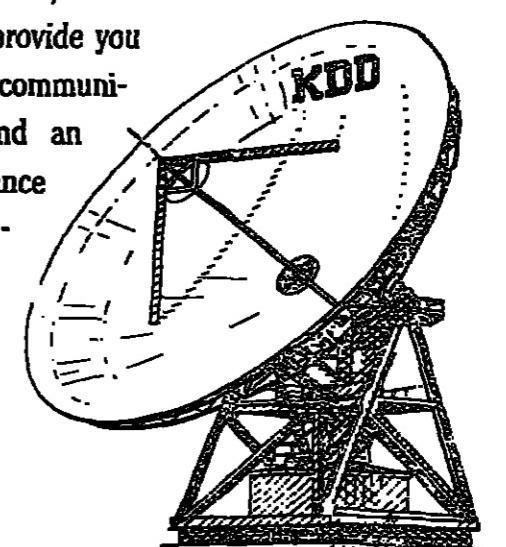
For companies who already have a private global network, ISDN enhances its performance, adding previously unattainable flexibility.

And, because this service will be developed further in collaboration with other leading international communications carriers, it will be a major force in the standardisation of all future ISDN technology.

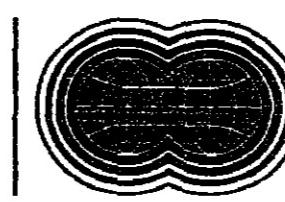
The combination of optical-fibre cables and ISDN has already opened up a new era of high speed, high volume communications with digital technology (whatever happened to that voice saying "lines from London are engaged, please try later"?). But it's not just

Close to the City in London's Docklands, the TELEHOUSE building is a totally new concept providing fully-operational fully-serviced Information Technology capabilities within a purpose-built centre.

And TELECOMET, with offices in London and Dusseldorf, can provide you with high quality telecommunication equipment and an after-sales maintenance service that has already positioned the company at the forefront of telecommunications innovation and development.



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INTERNATIONAL TELECOMMUNICATIONS-12

The European Commission faces a dilemma, reports William Dawkins from Brussels

Moves to break monopolies' stranglehold

THE CRUSADE to break public monopolies' stranglehold over the provision of telecommunications equipment and services in the EC has embroiled the European Commission in a revealing dilemma.

Market liberalisation is the dominant theme of the Commission's design for a free internal market in this traditionally cosseted and protected industry.

In that sense it is pushing with, and in some cases very much ahead of, the very different styles of telecommunications industry deregulation being pursued at different speeds in the UK, Germany, France and Italy.

The paradox is that the Commission has found it necessary to regulate at the same time as curbing its liberalising zeal. It has done this by tabling detailed rules for the conditions under which private service operators gain open access to public networks (ONPs).

Several Governments, led by the UK, feel this goes right against the spirit of telecommunications deregulation.

Brussels argues that these rules are needed to ensure that public authorities do not abuse their power and use obscure technical standards to keep private operators off their networks.

"Liberalisation and harmonisation go hand in hand," insisted Sir Leon Brittan, Competition Commissioner recently. Yet northern economic liberals like Brittan argue that the ONP plan threatens to suffocate deregulation.



Sir Leon Brittan insists: "Liberalisation and harmonisation go hand in hand."

Picture by Ashley Ashwood

The outcome of the broader debate on telecommunications will be crucial because EC legislation will have a deeper and more pervasive influence on this sector post-1992 than in almost any other industry.

This is partly because Community competition rules give the Commission unusual - and controversial - powers to issue laws on public services monopolies like postal and telecommunications authorities (PTTs) without going through the normal process of consulting member states.

Brussels has made full use of its authority in this respect. In the process, it has landed up in the European Court of Justice, accused of overstepping its powers by France, Italy, Belgium and West Germany.

At the same time, the Commission places the highest importance on telecommunications as the basic business infrastructure of the future, a market that it estimates will be worth up to 7 per cent of the EC's Gross Domestic Product by the end of the century (as against around 3 per cent today), by which time more than 60 per cent of European jobs are expected to depend directly and indirectly on telecommunications.

One senior Commission official likens the importance of the task to a contemporary equivalent of building railways across early 19th century Europe.

Brussels' strategy for opening the EC telecommunications market to free competition is laid out in the Commission's 1987 green paper on the subject.

Most of the proposals in that wide ranging document are now either in the early stages of being put into effect or on the table. They include the ending of exclusive rights to

supply terminal equipment; the liberalisation of value added services, followed later by deregulation for basic data transmission; the technical rules for free access to networks; the separation of telecommunications authorities' regulatory and powers from their operating roles; the creation of a European Telecommunications Standards Institute (ETSI); common standards for satellite communications and for the broad band telecommunications of the future.

The main action so far has centred on the related areas of telecommunications equipment manufacture and the provision of services through public networks.

Historically, PTTs have tried to keep the two sectors together to guarantee a reliable - and incidentally profitable - source of equipment to plug into the networks they run. The Commission has different ideas.

Its first onslaught was early last year, when Brussels made use of the rarely tested Article 90 of the Treaty of Rome, to issue its telecommunications terminals directive, without going through the usual months-long process of consulting member states.

This tactic provoked fierce criticism from several European Governments. But member states stopped short of trying to block the scheme because they generally liked its aims, despite their anger at its legal approach.

They want indefinitely to keep competition out of the provision of basic computer data telecommunications - like the transmission via telephone of information from one desk top terminal to another - a small but very fast growing part of the service.

PTTs must give up their control over basic data communications by January 1993, under the final version of the directive, adopted by the Commission last month. The Commission's argument for liberalising basic data services is that it is in practice impossible to distinguish between these and value added services (Vans), like electronic mail, teleshopping and videotext, also to be liberalised under the directive.

Here it follows the experience of Britain, which for the

same reason freed both basic data and Vans during its own telecommunications deregulation. Value added services will accordingly be due for deregulation when the directive comes into force on or soon after April 1990.

This first stage of liberalisation covers roughly half the EC's Ecu17.5bn telecommunications equipment market. National legislation is to be tabled by the end of this year

The outcome of the EC telecommunications debate will be crucial

to liberalise sales of telex terminals, data transmission equipment, mobile telephones and satellite receiver dishes.

The final phase, for national legislation to get started by the end of next year, covers subscribers' first telephone sets. This is the hardest part for PTTs, among which all but France and the UK receive the right of supply of first telephone sets for themselves.

Much to member-states' annoyance, the Commission used Article 90 again at the turn of the year issue a much more important directive, to liberalise the European telecommunications services industry.

Equally, it was a more provocative step in political terms, because several member states like Italy, France, Spain and Greece have serious doubts about the directive's content as well as its legal approach.

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PTTs must give up their control over basic data communications by January 1993, under the final version of the directive, adopted by the Commission last month. The Commission's argument for liberalising basic data services is that it is in practice impossible to distinguish between these and value added services (Vans), like electronic mail, teleshopping and videotext, also to be liberalised under the directive.

Here it follows the experience of Britain, which for the

optic links, micro-wave and satellite links, radio telephone and cable television. This is again in line with the trend in most European countries, except for the UK, to maintain network monopolies.

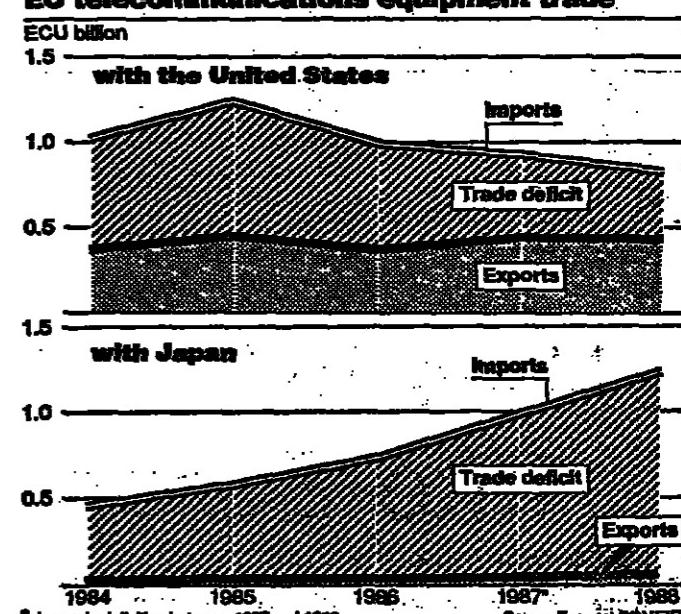
The terminal equipment and services plane are the central parts of the Commission's telecommunications policy. Around them hang a host of supporting measures, the general thrust of which is to smooth out the fragmentation that puts the EC market at a perennial disadvantage against its US and Japanese equivalents.

These include plans, awaiting EC Governments' approval, to extend existing rules on free public procurement to telecommunications.

Another obligation member-states to guarantee free market access to any telecommunications terminal made to EC technical requirements, in contrast to the present situation where equipment needs clearance by 12 individual national standards authorities.

The big test - as with a great deal of EC internal market legislation - will come when Governments actually have to enforce the rules, bringing some of them face to face with the hard fought interests of their national PTTs.

EC telecommunications equipment trade



Radical reform of the Bundespost

West Germany now a leading advocate for more liberalisation

WEST GERMANY was, in the past, seen by advocates of telecommunications liberalisation as the leader of the enemy forces.

Outsiders complained that telephone tariffs were excessive, that the Bundespost took every opportunity to stifle competition - and new services therefore failed to develop. Moreover, in the international arena, West Germany was regarded as an obstacle to change.

Now, however, Germany is thought by many to be on the side of the angels. After years of debate, the country's new law for reforming telecommunications came into effect at the beginning of this month.

Under this law, the door to Europe's largest telecommunications markets is being half-opened to competition. The Bundespost is also being restructured with the aim of making it less bureaucratic and more responsive to its customers.

This change in mood is perhaps best illustrated by the fact that, far from being an obstacle, Germany is now a leading advocate of further liberalisation throughout the European Community.

Along with Britain, it is the ring-leader of the countries supporting EC's Green Paper.

The most exciting opportunities are in mobile and data communications

In fact, it may be more effective than the UK in winning round the doubters because of its close political ties with France.

The German Government now goes so far as to claim that it has instituted a more liberal telecommunications regime than any other European Country - including Britain.

This, however, is a technicality. The Bundespost is not being privatised; no competition will be allowed in supplying the basic networks and voice telephony will remain a monopoly. Britain has moved on all three areas.

Even so, the Bundespost reform has the capacity to

shake up German telecoms. Observers predict that the monopoly services will account for only two-thirds of the Bundespost's revenue by the middle of the next decade - down from about 90 per cent now.

When the private sector is added in, the effect will be that only half Germany's telecoms market will be covered by monopoly rights. This is because the non-monopoly areas are growing very fast.

The most exciting opportunities are in mobile and data communications.

On the mobile side, the German Government has decided to license a second operator in competition with the Bundespost for cellular communications by the end of the year.

This contest has already drawn a glittering cast of applicants from across the world. The winning consortium has the prospect of being granted one of the most lucrative franchises ever handled by a government to the private sector.

In data communications,

the main opportunities will be in leasing lines from the Bundespost for basic and value-added services.

Because Germany is still poor in advanced communications services, there is great potential for private operators to innovate, outwit the Bundespost and tailor services to individual needs. Nevertheless, doubts remain as to whether the new regime, which promises free competition in these areas, will be able to guarantee it in practice.

One concern is that the dividing line between monopoly and non-monopoly areas is fuzzy.

This could allow the Bundespost to expand the definition of its monopoly to include many of the markets which would otherwise be attractive to private operators.

In theory, only basic voice telephony will remain a monopoly.

The Bundespost might be expected to win out over private operators because it will have excellent access to the minister's ear. Critics

would have preferred the institution of an independent regulatory body, on the lines

of the UK's Ofcom.

Another key purpose of the Bundespost reform is to revamp its internal bureaucracy. This should make it more efficient, dynamic - and so lead to lower costs.

The door to competition is being half-opened

However, given that both privatisation and competition on the basic networks are excluded, West Germany has few instruments with which to achieve the necessary change in culture. Instead, it is relying on performance-related pay to provide the incentive.

Even this scheme, though, has been watered down by political controversy, leaving the impression that this is an example of using a nutcracker when a sledge hammer is required.

A further element is the division of the Bundespost into three business:

- Telekom.
- Postdienst, the postal service.
- Postbank.

The idea was that each would be run as a separate commercial enterprise without political interference. However, this separation has not happened as cleanly and neatly as many wished.

The three businesses will still be responsible to a common directorate and, parallel to this, will be a special infrastructure council, made up of political appointees, which will have a major say over the matters such as new investment and tariff charges.

As a result, some critics doubt whether Telekom will be run on a genuinely commercial basis.

Even so, the Bundespost reform is for Germany a radical step. And the country can claim to have one of the most liberal - if not the most liberal - telecoms regimes in Europe.

Hugo Dixon

OUT ON HIS OWN.
WITHOUT A VODAFONE

OUT OF TOUCH.
WITHOUT A VODAFONE

OUT OF SIGHT.
WITHOUT A VODAFONE

OUT OF HEARING.
WITHOUT A VODAFONE

OUT OF REACH.
WITHOUT A VODAFONE

OUT IN THE COLD.
WITHOUT A VODAFONE

BE IN WHEN YOU'RE OUT. VODAFONE.

INTERNATIONAL TELECOMMUNICATIONS-13

Top 50 countries by base of installed main telephone lines

Rank	Country	Main Lines	Per cent of World Total
1	United States	121,475,000	28.57%
2	Japan	46,325,000	10.82%
3	USSR	29,475,000	6.88%
4	West Germany	25,389,284	6.16%
5	France	23,911,067	5.55%
6	UK (March 1987)	22,337,000	5.17%
7	Italy	18,262,573	4.25%
8	Canada	12,251,000	2.95%
9	Spain	9,801,000	2.28%
10	South Korea	7,659,000	1.78%
11	Brazil	7,245,741	1.68%
12	Australia	6,085,000	1.55%
13	China	5,860,000	1.40%
14	Netherlands	5,629,000	1.40%
15	Sweden	5,373,000	1.25%
16	Taiwan	4,728,919	1.10%
17	Mexico	3,820,500	0.92%
18	Switzerland	3,381,402	0.79%
19	Denmark	3,291,071	0.76%
20	Belgium	3,257,350	0.76%
21	India	3,185,214	0.73%
22	Argentina	2,859,206	0.65%
23	Austria	2,618,437	0.63%
24	Turkey	2,279,515	0.54%
25	Yugoslavia	2,720,561	0.53%
26	Denmark	2,683,000	0.52%
27	Poland	2,625,111	0.51%
28	South Africa	2,403,446	0.51%
29	Finland	2,272,000	0.50%
30	Czechoslovakia	1,944,009	0.45%
31	Norway	1,891,412	0.44%
32	Hong Kong	1,644,403	0.40%
33	Colombia	1,708,700	0.38%
34	East Germany	1,630,207	0.38%
35	Portugal	1,511,559	0.35%
36	Iran	1,480,233	0.34%
37	Romania (1979)	1,480,000	0.34%
38	Bulgaria (1983)	1,362,700	0.32%
39	New Zealand	1,327,785	0.31%
40	Venezuela	1,321,783	0.30%
41	Israel	1,313,000	0.30%
42	Saudi Arabia	1,082,522	0.25%
43	Egypt	1,076,450	0.25%
44	Malaysia	1,042,827	0.24%
45	Thailand	878,339	0.20%
TOTAL		419,030,123	87.57%

Source: UNCTAD, Telecom statistics

French telecommunications system**World's most highly digitalised network**

AT THE beginning of 1988, the French telecommunications authority, previously a ministry division known as the Direction Générale des Télécommunications, or DGT, changed its name to France Telecom.

In the mind of Mr Gérard Longuet, the minister for posts and telecommunications in the right wing administration of Mr Chirac, the name change symbolised a transformation into a more commercially oriented organisation.

Mr Paul Quilès, who replaced Mr Longuet when the socialist government of Mr Michel Rocard took office a year ago, has adopted a less interventionist approach to the problems of regulating the telecommunications market than his liberal predecessor.

A report he commissioned on the future of both the postal and telecommunications services rejects the possibility of turning France Telecom into an ordinary commercial company.

France Telecom remains, therefore, a branch of government, with all the complications that entails: subjection to the normal state budgetary rules, although unlike the spending ministries it finances itself from its receipts and not from taxation; adherence to civil service pay scales; and dependence on the government for its pricing policy.

It also carries the risk of being used by the government as a useful alternative to direct state funding, as happened last August when France Telecom and its subsidiary Cogecom were called in to rescue the ailing TDF1 and TDF2 satellite

broadcasting programme, of whose technological choices it had long been critical.

In 1988, however, a step was taken towards ordinary corporate status when telecommunications were subjected for the first time to value-added tax (VAT).

The application of VAT sliced FF10bn off France Telecom's potential receipts, causing a drop of 7 per cent in turnover to FF167.6bn. Net profits plunged for the same reason to FF1.5bn, compared with FF1.9bn the previous year.

But France Telecom continues to expand steadily to total 151,000 lines at the end of the year. Telecom's integrated electronic mail system opened in 1985, tripled last year and now numbers 10,000 subscribers. Transpac, the France Telecom subsidiary which is the world's largest packet switching network, recorded a 14 per cent increase in traffic last year and now transports around 1,500bn characters a month.

Rapid growth has also taken place in the mobile telecommunications market, where France Telecom's monopoly has been opened up to competition. Radiocom 2000, the radio telephone service operated by France Telecom with Mairis equipment, more than doubled its subscriptions to 98,000 at the end of the year, accounting for nearly 90 per cent of France's total radio telephone networks.

Numiris is already offered to businesses in Brittany and the Paris region, and the service, which allows the connection of "intelligent" telephone sets, is expected to be spread to the rest of the country by the end

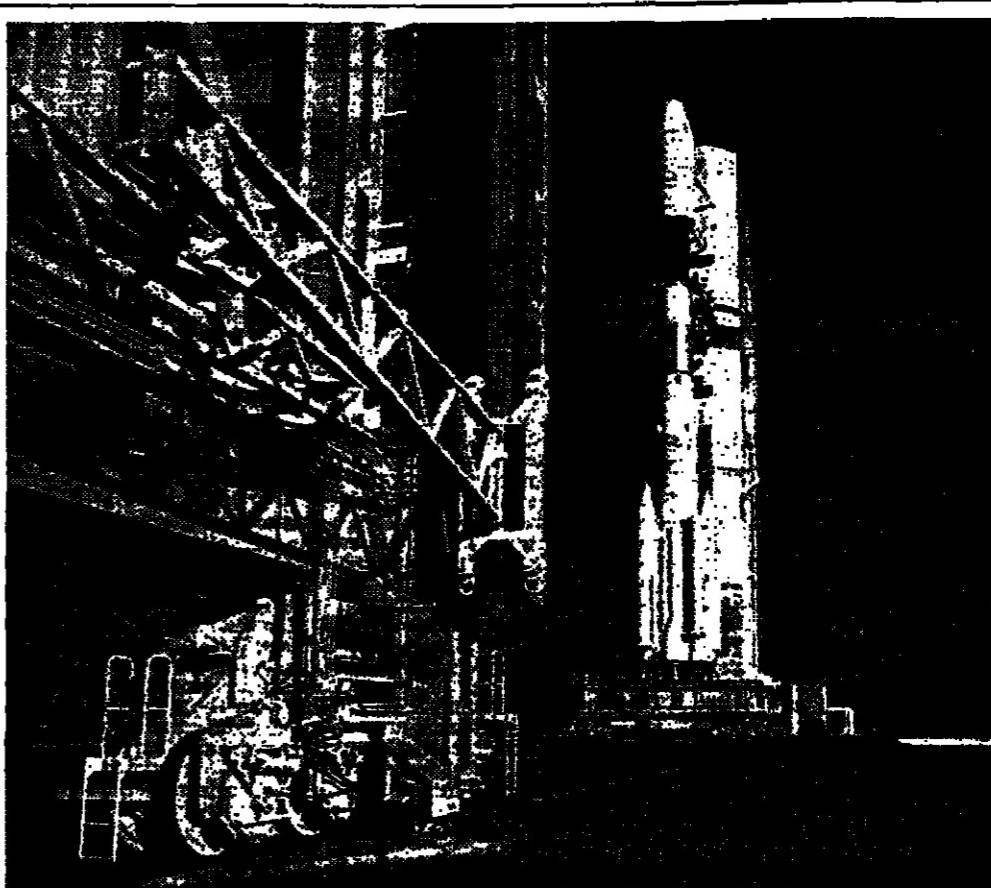
of next year. France Telecom forecasts 500,000 subscribers by 1990.

Other corporate telecommunications sectors also saw rapid expansion last year, led by explosive growth in the fax market, which is growing currently at an annual rate of 70 per cent, and totalled 185,000 terminals at the end of 1988. Each fax machine is used to send an average of 17 pages a day, France Telecom calculates.

While the traditional telephone continued to expand steadily to total 151,000 lines at the end of the year, Telecom's integrated electronic mail system opened in 1985, tripled last year and now numbers 10,000 subscribers. Transpac, the France Telecom subsidiary which is the world's largest packet switching network, recorded a 14 per cent increase in traffic last year and now transports around 1,500bn characters a month.

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The West European Ariane space rocket carrying a European satellite and Japan's first commercial telecommunications satellite, pictured at Kourou, French Guiana.

will be able to make, though they receive calls as long as they are within 200 metres of a special radio terminal. The system is to be commercialised in France under the name of Pointel.

One of France's proudest telecommunications achievements, the Minitel videotext system, is also at the moment one of the most contested. The system has developed to boast 4.7m terminals at the end of June, with 24.5m hours of use in the first six months of 1989.

But the Cour des Comptes, a state auditing body, has just attacked the economic justification of the programme, hitting at its very foundation: the free distribution of terminals to private users.

The number of wavelengths made available in France for radio telephone services, however, is limited. The two networks combined will become saturated in three or four years with around 350,000 subscribers, compared with 500,000 radio telephones already in service in the UK.

France Telecom has, however, joined the Telepoint portable telephone consortium of British Telecom, where users

will be helped by opening access points overseas in countries like the US or, more recently, Japan, to enable companies to link up their foreign operations to the Minitel.

Meanwhile, France faces over the coming months growing pressure from the European Commission to deregulate the telecommunications market further, including a reduction in the semi-overt protection practised by not granting authorisation to foreign-manufactured equipment such as faxes, answering machines or computer modems.

Mr Quilès shows no intention of letting himself be pushed about by Brussels, and has already filed a suit in the European Court to complain about a Commission directive liberalising equipment sales without the approval of the Council of Ministers.

"I have no intention of anticipating or accentuating the deregulation which we are experiencing," he commented recently. "It's a bit like rain: even if you don't like it, there is not much you can do to stop it."

George Graham

Equipment manufacturing in Italy**New bridgehead planned into European markets**

A FOREIGN diplomat based in Rome had some difficulty in having a telephone installed in his apartment after arrival — the waiting time is usually measured in months, rather than weeks.

Tired of a long delay, he made vigorous protests to Sip, the national telephone company, which eventually resulted in an installed

telephone.

In the following days, his telephone rang repeatedly with callers seeking repair work of some kind or another for their motor car. Quicker in making a mutual connection than by searching a telephone, the diplomat visited a garage in the creaky west of Rome whose owners were telephonists at

made as to when the proposed union can take place.

On the telecommunications manufacturing side, Italy has been doing its best to strengthen a weak international hand. Teletel, the Fiat-owned company specialising in switching systems, has been building up a number of international alliances, particularly with Spain's Telefónica.

But most national hopes are now resting on the deal signed in early June which, through exchanges of shareholdings, blithes the fortunes of the relatively small state-owned Ital tel to the vast multinational wagon of American Telephone & Telegraph (AT&T).

Kafka might also have garnered some rich material from the fragmented nature of the telecommunications industry which in the past has helped to serve one of the dominant priorities in the public sector — avoidance of any clear allocation of responsibility.

So it is that Italy has three telephone operating companies: Sip, Italcom, which handles overseas traffic, and ASST, a trunkline operator owned by the Ministry of Posts and Telecommunications.

No fewer than nine joint developments are envisaged ranging from developing "intelligent networks" to be attached to Ital tel's Linceo UT.

If it is running in Rome, one hardly ever succeeds in making a connection at the first attempt. This is not a source of satisfaction to most Italians, and a general desire to improve the quality of service allied to management structures could be a highly undesirable competitive handicap in the European single market is at last producing both actual and prospective changes.

The change is still more positive than actual as far as the proposed re-organisation of the operating companies is concerned.

Sip, the state-owned telephone holding company, produced a plan in early 1988 for merging the operating businesses — Sip, ASST and Italcom — and transforming itself into Italy's single telecommunications operator.

Unfortunately, the transfer of ASST required parliamentary approval of a special law and this has been delayed both by technical and financial considerations — how to make sure that ASST's 12,000 employees did not lose their superior pension rights as a result of the change — and by the usual parliamentary inertia.

No reliable forecast can be

National hopes are now resting on the deal signed in June between Ital tel and AT&T of the US

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DIAL 100 AND ASK FOR
FREEFONE DAWESFONE

John Wyles
in Rome

INTERNATIONAL TELECOMMUNICATIONS-14

FIVE YEARS after the break-up of American Telephone and Telegraph and the start of deregulation of US telecommunications, three distinct types of player have evolved each with different and fast diversifying strategies.

AT&T's local telephone operations across the country which constituted the dominant Bell system were spun off into seven "Baby Bell" regional holding companies. AT&T was left to face fiercer competition in long distance services but was allowed to enter new and unregulated businesses.

This set a new stage for the three types of companies: the regional Bells, the long distance carriers and the independent non-Bell companies some of which can offer both local and long distance service through a quirk of regulation.

The regional companies, hardly babies since each of their annual revenues range from \$10bn to \$15bn a year, have differed on diversification. At one end of the spectrum, Ameritech has stuck closely to providing telephone service in five midwestern states. At the other, US West and BellSouth, for example, have pushed aggressively into overseas ventures.

The US has seen many changes since the breakup of AT&T in 1984, reports Roddrick Oram

Competitive ding-dong among the Bells

Ameritech's strategy has reaped the highest reward so far. The Chicago-based company achieved an annual return on equity of 15.4 per cent in the financial year 1986-88 against an average of 14.1 per cent for the other six Baby Bells.

Last year its net profits rose 4.1 per cent while BellSouth's was essentially flat even though it serves an economically vibrant region of the country. Ameritech has had some misfires with its own strategy such as losing some \$50m buying a software company in 1986 and selling it in 1988. But it has also prospered from, for example, helping to pioneer cellular telephone services with Chicago the first US city served.

Internationally-minded Baby Bells such as BellSouth argue that telecommunications is increasingly a global business so their future lies in learning how to do business abroad. They see foreign markets as

places to sell their existing expertise and to learn new skills which they are not allowed to offer yet in the US.

BellSouth, for example, sells telephone equipment and services in Shanghai, cellular service in France and paging in

Competition has pushed down rates by nearly 50 per cent in the past five years

the UK, all businesses it pursues in the US, US West's foreign activities include cable television joint ventures in the UK, a business it hopes regulators will eventually allow it to develop in the US.

The regional boundaries between the Baby Bells began to breakdown as soon as they were drawn. Ameritech, for example, competes against Southwestern Bell to supply cellular services in Chicago. Further down the road, the

Baby Bells may be allowed to offer long distance services.

AT&T is aware of this possibility and, pressed hard by current long distance competitors, has made huge strides in turning itself from a complacent, bureaucratic, regulated utility into an aggressive corporation responsive to customers and driven by the profit motive.

Its share of the long distance market has fallen from roughly 90 per cent pre-break-up to about 75 per cent, with MCI Communications and US Sprint making the biggest inroads followed distantly by a gaggle of small systems and re-sellers of services.

Competition has pushed down the long distance rates by nearly 50 per cent in the past five years and new types of services have proliferated. More importantly, AT&T, MCI and Sprint have invested heavily in fibre optics with benefits in higher quality and lower cost of transmission.

MCI and Sprint are reporting rapidly rising sales and profits while that their investment programmes are behind them. They have both targeted large corporate users with notable success at winning business from AT&T.

AT&T has in the past year or so started to fight back more effectively. It got a big hit earlier this year when the federal government changed the way it regulates AT&T. Instead of being limited to maximum return on assets, it has broadly speaking only to comply with price caps. This will not only increase the flexibility of its pricing practices but also allow it to increase its profits by driving down costs.

Thus, the new system is a real incentive to AT&T to become even leaner and meaner in the marketplace.

The Federal Communications Commission, the industry's regulatory agency, is also planning to switch regional Bell holding companies to the same system. Although this

would significantly ease the regulatory burden on them at the federal level, they will still suffer from regulations at the state level which in a number of cases are cumbersome.

At the federal and state

level, AT&T and the regional

Regional boundaries between Bells began to breakdown as soon as they were drawn

holding company, which is seeking approval for its purchase of a majority of a small Chicago cable company.

Permission to enter the cable

business would open the door to a wide range of new services which in turn would finally make economic the provision of fibre optic services into homes.

Last but far from least are the independent telephone companies. Contrary to a common misconception, the US telephone industry is not entirely populated by Ma Bell or her progeny.

Though the independents have only a small share of the overall market, there are more than 1,400 of them. Thanks to the large and growing degree of deregulation they are growing in importance and number.

A number of the regional

Bells are fighting to roll back what remains of regulation.

AT&T wants to enter the electronic publishing business.

At the moment it can only transcribe information generated by independent data bases and other interactive services.

A number of the regional

Bells are lobbying for the right to transmit cable television signals and to own cable television companies. In the forefront of the fight is Pacific Bell

which provides 14.4m lines in 31 states or United Telecommunications which serves nearly

4m subscribers.

US Sprint is owned 80 per cent by the latter and 20 per cent by the former. This sector also includes the hot cellular telephone companies. The country is divided into operating areas with two licensees in each - one was given to the local regional Bell and the other to an independent.

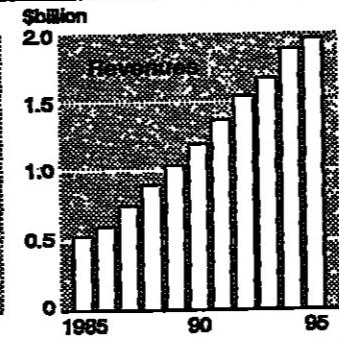
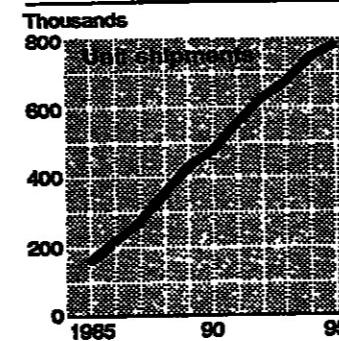
In some cases the independent licence has been taken over by a competing Bell company, as in Chicago. But elsewhere a number of players have built up large stakes. The largest company in cellular industry in terms of population in its licence areas is McCaw

Cellular Communications. British Telecom was attracted by its growth prospects and took a 20 per cent stake in McCaw earlier this year for £1.37m.

The far bigger challenge for the likes of McCaw, now that they have amassed territories, is to vastly increase the subscriber base. The cost of equipment is falling fast but the cost of service is still high and the quality patchy. Although cellular could be the telecommunications story of the 1990s, the industry has a long way to go before it can consider itself a true rival to traditional wire-based telephone services.

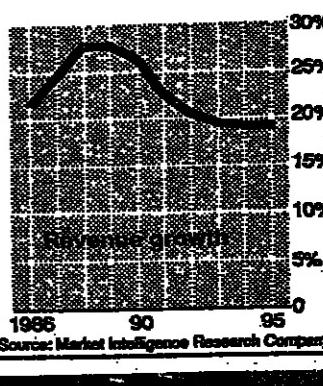
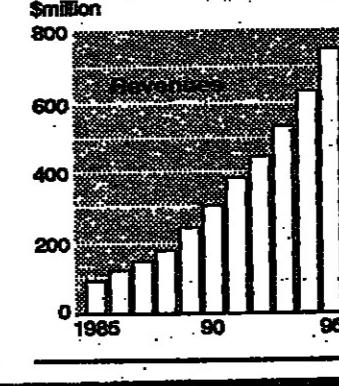


US multiplexer market forecasts



Source: Market Intelligence Research Company

East Asian multiplexer market forecasts



Source: Market Intelligence Research Company

■ In the US, (left), customers examine a range of new telephones at a Sears department store. ■ In Japan, (right), contractors test communication equipment in the control room of the space chamber at the Tsukuba Space Centre, Ibaraki. Telecom equipment production in Japan totalled Y2.114bn in the financial year 1987-88. Exports amounted to Y2.114bn in the financial year 1987-88. Exports amounted to Y676.3bn, while imports totalled Y49.6bn. Exports to the US in 1987 reached Y259bn, up 10.6 per cent from the previous year with imports from the US declining 0.3 per cent to Y61.4bn during the same period.

Picture by Ashley Ashwood.

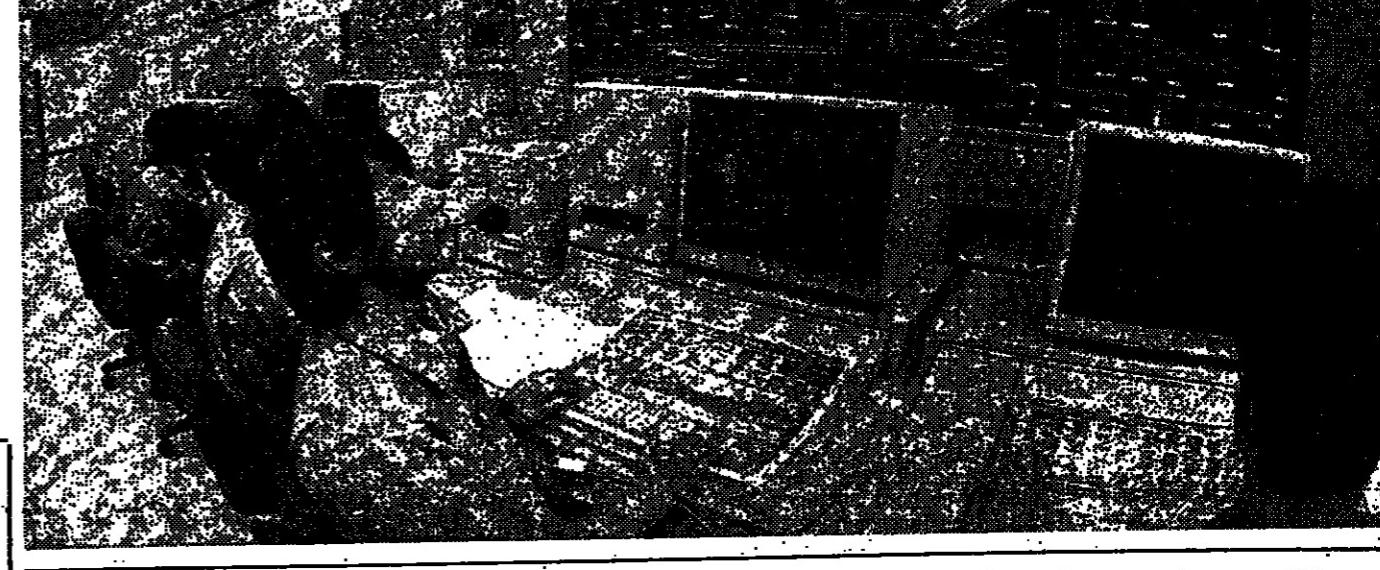
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Access to the Japanese market still agitates foreign competitors

Open approach to tackle unresolved trade imbalance

ON THE cover of the new Ministry of Post and Telecommunications Japan market outline pamphlet, the word "open" in huge boldface capital letters crystallises the theme promoted in its 45 pages.

Furthermore, a table showing recent results of telecom market opening measures gives the impression that foreign companies, mainly from the US, are making substantial inroads into the Japanese market.

One name, Motorola, crops up in enough places to leave no doubt that it does not expect to be overshadowed by the likes of IBM, Hughes or AT&T.

Motorola, a large electronics equipment maker, operates through its affiliate, Nippon Motorola. It sells pocket pagers and cellular telephone devices to Nippon Telephone and Telegraph (NTT), central equipment and pagers to Tokyo Telemesse and helps operate private MCA trunk systems throughout Japan.

Daini Denden, part of the Kyocera Group, an incipient competitor to NTT, plans to use the Motorola system for its cellular telephone services in the near future.

The situation, however, is far from clear. The US took Japan to task in the June telecommunications trade negotiations following Motorola's accusations of unfair trade practice under the US Omnibus Trade Bill.

The MPT pamphlet quotes Mr George Schultz, US Secretary of State, on "a remarkable success... substantially resolving all problems raised in the course of the MOSS (open market sector selective) discussions." It indicates, as a primary result of the 1985 talks, an item that confirms a revision of cellular phone technical standards in order to accommodate the Motorola system.

Problems remain in spite of this summation. Among the MOSS results was an agreement to do a full review of telecommunications legislation and, in particular, to abolish the distinction between special and general type two telecommunications business. A US government official says Japan agreed to abolish the distinction but later reneged. Transparency of allocation has been another sticking point since MOSS.

Market data supplied by MPT suggests another reason why telecom access continues to agitate many potential foreign competitors.

Telecom equipment production in Japan totalled Y2.114bn in the financial year 1987-88. Exports amounted to Y676.3bn, while imports totalled Y49.6bn. Exports to the US in 1987 reached Y259bn, up 10.6 per cent from the previous year with imports from the US declining 0.3 per cent to Y61.4bn during the same period.

The value of wire communications equipment exports by Japan in 1987 totalled over

the cellular telephone rights to Y524bn with imports, including payments for satellites, at only Y38.2bn. Even more lopsided was the export of Y265bn for transmission equipment while less than Y1bn was spent on imports.

In the face of the imbalance in the telecom trade with Japan, foreign companies seem more willing to resort to the use of political pressure. Japanese trade officials have admitted that without pressure from the US government certain market demands made by US companies would not even have been considered.

This was certainly the case two years ago when Cable and Wireless, the UK telecoms group, summoned up political clout from the highest levels of the British Government to get the Japanese to honour their pledge to open the international telecoms field to foreign companies.

International Digital Communication (IDC), the consortium in which C&W is a principal shareholder, won a license after a long battle and began private line operations last spring. It is one of two carriers due to start public service in the autumn in competition with Kokusai Denki Denwa (KDD).

Mr John Stern, vice-president of Asian operations for the American Electronics Association says one problem that trade negotiations have not yet solved is to what extent the Japanese government is in business to adjust market access based on projections of market growth.

A US carrier applying for a license to operate a communications satellite in Japan was refused market access on grounds of "excessive competition."

Mr Stern says "excessive" in Japan has the same meaning as "real" competition in the US.

Resistance by Japan's tele-

communications establishment toward new foreign competition is not monolithic. "Bloody turf wars" between officials at MTI and MPT have raged ever since 1985, US officials say. That was when the privatisation of NTT and steps to open the market aimed at both NTT and KDD

went into effect to mark the start of telecom reform in Japan.

Mr Stern says MTI has relaxed its tendencies to regulate market access to foreign business. While senior management at NTT, Japan's largest company, is sincere as regards foreign procurement, junior level employees are often trained to favour domestic equipment and carry an innate bias against foreign procurement, he says.

Besides having overseas procurement offices in New York, Los Angeles, London and Geneva, NTT has also put on government seminars in 21 cities in five countries since 1985.

In the face of the trade imbalance companies seem more willing to use political pressure

MTI's overseas activities must be a refreshing counterpoint to the domestic scene, where the MPT is considering breaking up the company along the lines of AT&T of the US. In addition, new domestic Tokyo, Nippon Motorola has gained carte blanche to push its third-party radio communications service for parrot delivery up to a value of Y220bn, with production of radio communications equipment for mobile stations expected to show an average annual rate of increase of 10.3 per cent up to 1992.

In the wake of the June trade negotiations that focused on Motorola's telephone market access complaint, US officials say both sides remain somewhat disatisfied. While a more open market will obviate the need for pressure tactics, one US government official says "it is difficult politically." If they dig their heels in on everything. We have to show resolve too."

"You always have to pay a price; you just hope you gain more than you lose," he says.

Chris Perry

INTERNATIONAL TELECOMMUNICATIONS-15



China has less than one phone per 100 of its population.

CHINA

A giant market

CHINA'S highly inadequate telecommunications system, with less than one telephone per hundred of its population, is the largest stumbling block to its development. It has been targeted as one of the main areas by the Peking authorities in their ambitious economic reform programme which will carry China into the 21st century.

Expenditure on the modernisation of the telecommunications system between now and 2000 is likely to be more than \$21bn, and this has drawn companies from all over the world looking for a slice of the action in this vast and relatively untapped market.

Like most other corporate dreams of China and its billion consumers, telecommunications companies are finding the going tough - the huge profits remain more imaginary than real.

Intense competition from Japanese, American and European companies has cut margins to the bone, with short term profits being sacrificed for long-term positioning in the market.

With many soft loan packages temporarily frozen by governments in protest at the crushing of the democracy

The political crisis has cast a shadow over international co-operation, says Michael Murray

movement, and China suffering from an acute foreign exchange shortage and general economic problems, the big pay off seems to be receding into the distance.

However, the potential remains impossible to ignore. According to the Ministry of Posts and Telecommunications the plan is to reach 2.8 telephones per hundred head of population by 2000, from 0.75 per one hundred at present.

Even this seemingly modest target, compared to 50 or 60 per hundred in developed countries such as Japan, the US and European countries, will require a vast commitment of manpower and resources.

The overall national plan, which is being centrally co-ordinated by the ministry is to link up the country's provincial and municipal centres with a digitalised long distance switching and transmission network. Parallel with this, each provincial authority is responsible for investment in and development of its own systems internally, though nationally consistent overall specifications must be met.

Thus for many suppliers the big orders will be at the provincial level, both in the main switching network and the end terminal network. The main areas of development will be in the large cities near China's coastline, from Peking and Tianjin in the north, to Shanghai and down to Guangzhou in the south. Between 1978 and 1988 these four cities accounted for 25 per cent of all investment by the state telecommunications ministry, and have telephone densities way above the national average.

The building of private networks for important institutions such as banks is being encouraged, and a private network for the state railway system is being built. The national and provincial dev-

elopment plans will be pursued through a combination of old and new technologies, with copper wire, optical fibre, microwave transmission and satellites all playing their part.

According to Mr Graham Bacon, regional managing director of GEC Plessey Telecommunications Far East, equipment suppliers eyeing what is undoubtedly a huge potential market must accept the need to manufacture in China if they are to be successful.

Mr Bacon said that foreign participation was accepted as crucial by the Peking authorities - given the huge research and development costs involved in modern telecommunications, and because technology transfer plays a leading key role in winning business.

There are many joint venture factories in China producing telecommunications equipment, including one in Shanghai making optical cable which has been used to install the optical fibre communications system connecting the cities of Hefei and Wuhu in Anhui province.

Faximile equipment is being produced. The fax is seen as having an important role to play as it is suited to transmitting Chinese script.

China is determined to press ahead with manufacturing for export, in order to generate much needed foreign exchange. This is also an incentive for the development of its international services. Most big hotels in the main cities offer international direct dialling, which is paid for in hard currency by visiting businessmen. But this service is not generally available, with long queues to book international calls.

All international calls, except those between Guangdong and Hong Kong, are routed through switching centres in Peking or Shanghai. Guangdong province has benefited greatly from its proximity to Hong Kong, where Cable and Wireless has been keen to help build up the infrastructure in southern China so as to generate more calls to and from Hong Kong.

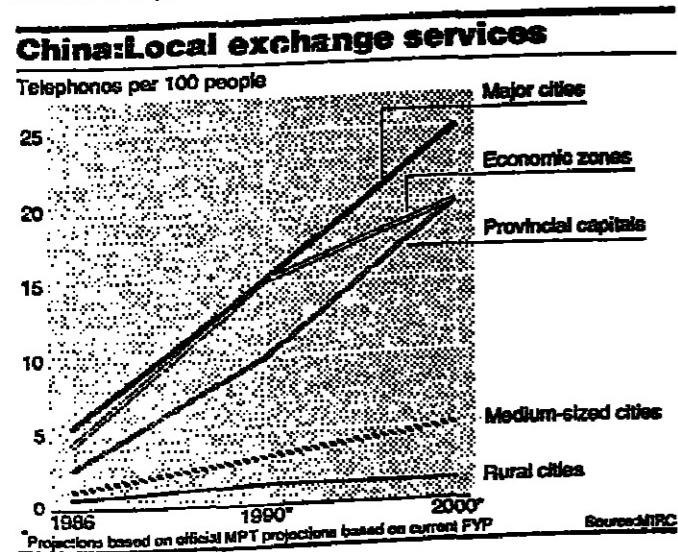
Cable and wireless is also a partner in the AsiaSat communications satellite scheduled to be launched from China in April - though it may have to be launched from another country as a result of technology transfer sanctions against China on the part of the US.

Competition among foreign suppliers is intense

"We are constantly striving to expand the traffic capability of China using Hong Kong," said Mr Nathan Hsu, marketing manager at Cable and Wireless for China. He stressed the optical fibre cable system inaugurated last year between Hong Kong and several cities in Guangdong, which markedly increased traffic capacity.

The link is used mainly to connect Hong Kong and Guangdong, though there is potential for Hong Kong to act as an exchange point for international calls out of China to the rest of the world, along with Peking and Shanghai.

Guangdong is at the front of mobile telephone systems in China, and along with Tianjin, Shanghai and Fujian provinces has adopted the total access communication system (tacs). With the help of western



international suppliers want to exploit the ending of a monopoly, says John Elliott

Puzzle for Hong Kong

Should it follow the entrepreneurial ethic and open its telephone and allied services to competition?

Or should it bow to the parallel ethic of rewarding efficiency, and allow Hongkong Telephone to renew its 80-year-old monopoly on domestic telephone voice services, which expires in 1995?

On balance, it seems likely that the British-influenced colonial government will follow the UK-led international liberalisation trend and decide some time next year that the monopoly should end in 1995.

But Hongkong Telephone - known locally as Telco - intends to mount a major defensive campaign when it starts talks with the government later this year.

In the meantime, international companies which would like to exploit an ending of the monopoly - notably British Telecom and US West, one of America's baby Bells - have been staking their claims in advance by linking up with rival consortia bidding for Hong Kong's first cable television licenses.

The government is now in the process of awarding 15-year licences for what is expected to be the largest cable television system in the world, potentially covering 1.5m homes. But the licences have a much wider significance because the

winner will lay a second duct

network and will immediately

be allowed to offer non-voice

telecommunications services.

The new network will then be

in place for domestic voice

transmission after 1995 if the

Telco monopoly ends.

Telco is part of Hongkong Telecommunications which is 75 per cent owned by Cable and Wireless of the UK. It has had a monopoly on the colony's local voice network for over 60 years and has radically improved its operations since the 1970s when its quality of service was poor, with long customer waiting lists and considerable staff corruption.

Under a regulatory system

negotiated with the govern-

ment, which is known as the

scheme of control, it does not

charge for local calls. It says

that this leads to a very high

local calling rate which

induces people to direct dial

more profit-generating interna-

tional calls than would otherwise

be the case.

In 1987-88, there were 310m

minutes of outgoing interna-

tional calls, including 42m

minutes of fax and data transmis-

sions which was 92 per cent

higher than the previous year.

These international calls are

handled by Cable and Wireless

(Telco receives a percentage)

under a separate intercon-

nection monopoly agreed in 1981,

which lasts till 2000, nine years

after Hong Kong has reverted to

Chinese sovereignty.

The scheme of control also

imposes a profit ceiling of 16 per cent on shareholders funds. This generates Telco sufficient cash for extensive investment which this year will total HK\$2.1bn - a high figure in relation to the HK\$6bn book value of the network because obsolescent 1950s-vintage equipment is being progressively removed, with a target date of 1995 for the completion of a fully-digital system.

The current scheme of control ran out at the end of last year but was extended for 15 months, so it should be renegotiated soon.

This means that there are three imminent events which could change the regulatory face of Hong Kong's telecommunications. First, there is the

cable television contract with its allied potential for immediate non-voice telecommunications services. Then there will be the renegotiation of the scheme of control.

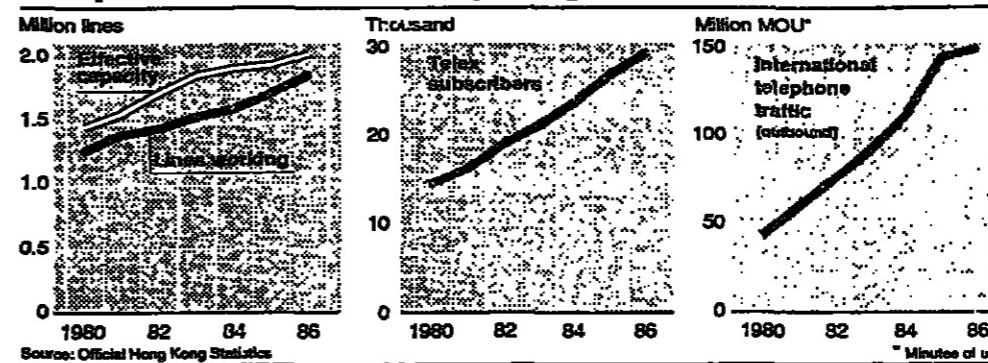
At the same time the government will negotiate with Telco about the new voice monopoly, probably using the new cable and non-voice licence holder as a stalking horse. The government estimates that 96 per cent of the phone market is catered for, which means that Hong Kong is saturated with what is generally accepted as a highly efficient telephone operation.

However, the government believes that there is considerable potential for developing a wide range of telecommunications services and that competition would help this to develop and cater for general growth.

The cable TV story started in 1987 when Telco suggested that it should extend its role on its network. The government was interested, but competition soon emerged from Hutchison Whampoa, one of Hong Kong's four major Hong business empires controlled by Mr Li Ka-shing. Hutchison proposed laying a second network and this stimulated the government's interest in opening telecommunications up to competition.

Telco failed to persuade the government that, after some modifications, its existing optical fibre network could be used and that a second network was unnecessary. The government

Continued on page 16

Telephone services in Hong Kong

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INTERNATIONAL TELECOMMUNICATIONS-16

It can take up to 20 years to get a telephone line in the USSR, says Daniel Green

Eastern Europe: desperate to modernise

EASTERN EUROPE is desperate to modernise its telecommunications. Its citizens wait a long time to get telephones connected: 5 per cent of Hungary's population is on the waiting list, and in the Soviet Union it can take up to 20 years to get a line, although four years is typical in Moscow.

The Comecon capitals are not short of ambitious plans to change this. Yearly spending on telecoms is forecast to rise from \$9.8bn in 1986 to \$23.7bn in 1995. By then, the eastern bloc will be the third largest market after western Europe and North America, in that order.

Comecon countries are gradually easing trade regulations, particularly on the establishment of joint ventures. Attitudes are changing too: western business executives with telecoms deals in their briefcases speak of being welcomed with "honest enthusiasm" and "open eagerness" by foreign ministries and telecommunications authorities.

IN ONE respect, the world's telecommunications industry has an impressive history of international collaboration.

Despite the fact that operating companies are run nationally, and have generally been supplied by domestic equipment producers, the industry has from its inception been aware of the need for users to transcend national boundaries. A web of complex international agreements has been constructed to respond to this demand.

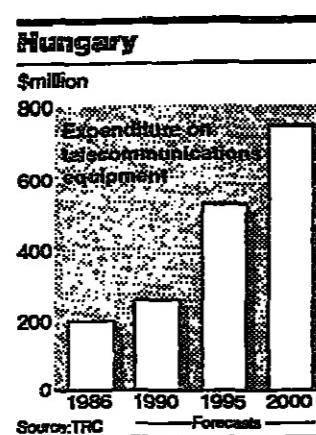
Yet telecommunications today is in some ways dividing the world today as much as helping to bring it together. The growth of telephone systems is running along twin tracks — or even diverging ones.

In the developed industrial world, telephone operating companies are spending heavily on a new generation of sophisticated digital equipment; yet at the same time, developing countries are struggling to achieve even a basic network.

This disparity in telephone services has a variety of consequences. It emphasises the North-South divide in the world's economy between the rich and the poor countries; it saps the ability of the developing world to attract advanced industries which depend upon effective telecommunications; it means that the vast bulk of the population in poor countries does not have easy access to a telephone; and it limits the ability of the poorer nations to climb out of their poverty through industrial growth.

The importance of telecommunications as an enabling factor in growth has frequently been emphasised. Indeed, some studies suggest that economic expansion is strangled at a certain point without an efficient telephone system; and good communications networks clearly disseminate information in a way that makes it more difficult to rig and control markets.

Because of the growing realisation of both the problems and opportunities, efforts to promote more telecommunications investment in the developing world have gathered force throughout the 1980s. These initiatives, led by the



chronic shortage of hard currency, in many cases exacerbated by high levels of foreign debt and/or inflation. Counter trade is possible. But PepsiCo of the US has seen up Bulgarian wine exports, and would be exporters are likely to find themselves offered tobacco or scrap metal.

In spite of these obstacles, many western companies are penetrating deep into the virgin territory of the East. GPT, jointly owned by Plessey and GEC of the UK, has a joint venture in the USSR to make payphones; Australia's Bond Corporation has signed a letter of intent to set up the East's first public cellular mobile telephone network in Budapest; Canada's Northern Telecom, Sweden's Ericsson and Telenokia of Finland all have

or are in the process of securing deals to supply central switches.

The need for international links has attracted satellite and fibre optic cable salesmen. Several countries are members of Imarsat (the international

five years behind the West in component manufacture and could be manufacturing the Imarsat set Standard C link within five years," says Mr Rob Gallagher of Imarsat. This talent is largely limited to satellite and radio commun-

Yearly spending on telecoms in the eastern bloc is likely to rise from \$9.8bn in 1986 to \$23.7bn in 1995

satellite organisation, fees payable in dollars) and more are expected to follow.

Last year it ran a roadshow throughout eastern Europe and reported keen interest and a high level of technical expertise.

"Czechoslovakia is less than

nations. One observer estimates the time lag elsewhere to be about a decade.

The need for international links has persuaded Moscow and a consortium of capitalist PTTs, including EDD of Japan, West Germany and British Telecom, to carry out a feasibility

study into laying an optical fibre cable across Siberia to link Europe with north-east Asia. Calls are currently carried by satellite or a pre-computer age cable called Simese, running from Singapore through the Middle East to western Europe. A decision on the trans-Siberian cable is expected by the end of 1989.

Projects such as these are expensive. There are three ways for the eastern bloc to cope: joint ventures, counter trade, and the keenly avoided hard currency payment. The first of these is flavour of the month for both sides.

Forecast rates of telecoms growth between 1990 and 1995 vary from 100 per cent in Hungary and Czechoslovakia to 31 per cent in Bulgaria.

The Soviet Union plans for an increase of 52 per cent.

□ Continued on page 17

Exports of telecommunications equipment to the USSR by leading suppliers (US\$ 000s)

	1986	1987
UK	359	178
France	3,483	6,278
Netherlands	31	31
West Germany	4,683	4,604
Italy	327	793
Austria	158	175
Switzerland	72	77
Finland	92,776	704
Sweden	144	65
Yugoslavia	32,954	44,041
Japan	1,013	1,260

Exports of transmission equipment to the USSR by leading suppliers (US\$ 000s)

	1986	1987
UK	65	26
France	102	30
West Germany	284	219
Italy	25	25
Finland	23,497	704

Source: ITU

city of foreign exchange and the high cost of foreign equipment.

Some economists argue, however, that this intense interest in manufacturing in many countries is misguided. Scarce resources would be best used, they contend, in strengthening telephone networks to give a boost to the entire industrial and commercial infrastructure.

One point here is that the resources needed for telecommunications development, whether on the manufacturing or the services side, are equally limited in developing countries.

For the foreseeable future, both technologists and managers, the two essential ingredients for growth, are in short supply, and sufficient training is not yet available to fill the gap: spreading funding and personnel still further between two fields of activity reduces their impact even more.

Several developing countries are beginning to move in the direction of putting more emphasis on the services side. Some are even doing it on a joint venture basis — the telephone companies in both Spain and Portugal, for example, have been active in South America; and Cable and Wireless, the UK group, runs the telephone systems in many countries that used to belong to the British Empire.

To extract the full effect out of these investments, however, many experts say that developing countries must alter their attitudes to the telephone operating companies and tighten up management.

The network groups are frequently used as cash cows with funds to be drained off for other central Government activity; and they also supply employment for armies of public sector workers.

Economic expansion
is strangled at a certain point without an efficient telephone system

"There is a problem," says one consultant, "in persuading Western countries and companies to participate in projects in developing countries when they suspect that a great deal of the funds will go towards maintaining a high level of feather-bedding among employees."

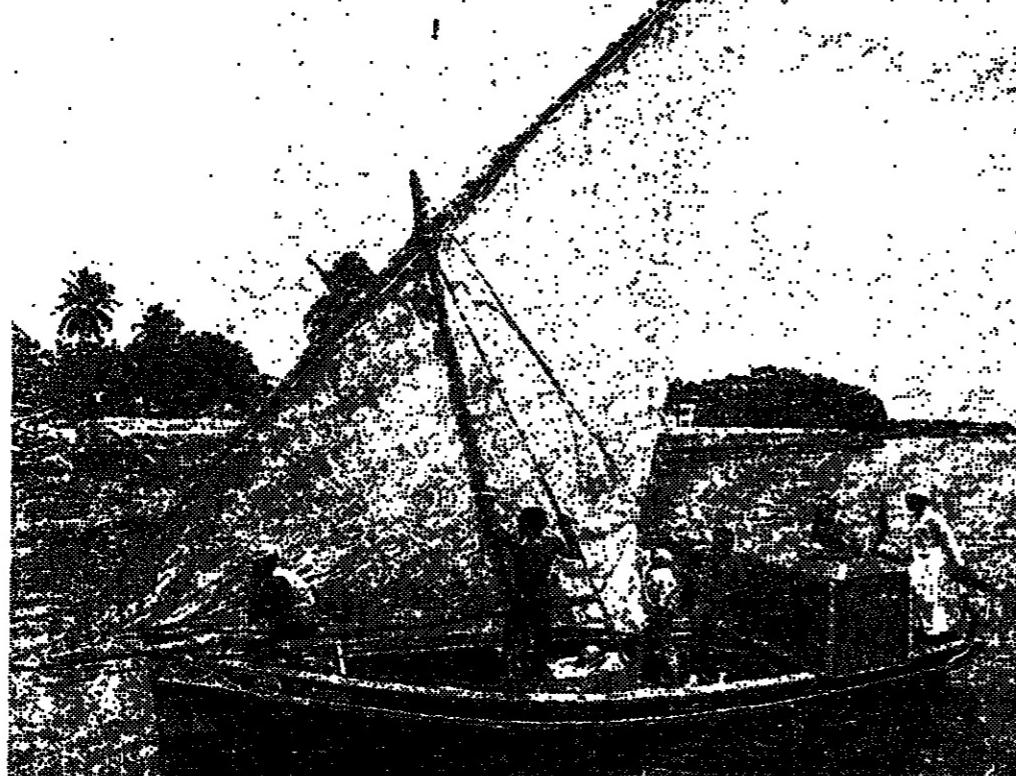
Costly connection

IRAN is the most costly country in the world in which to have a private phone installed, according to a report from Siemens, the telecommunications group.

The Iranian installation fee is ten times higher than in the UK and 17 times the cost in the US. But Iran's rate for three-minute local calls is relatively cheap: a quarter of the cost of the UK figure and twice the average US rate.

Terry Dodsworth examines links between equipment manufacturers and developing countries

More international collaboration urged



■ **DELIVERY BY DHOW:** when British Telecom had to ferry an entire telephone exchange to Lamu Island, off the west coast of Kenya, the only transport available (above) was an Arabian-style dhow.

This modern exchange-in-miniature is the digital UXD 5, designed for rural communities and supplied as part of a £80m project to update Kenyan telecommunications.

■ **HELPING TO SAVE LIVES:** Following a plea by a doctor in a remote Kenyan hospital, a BT telephone exchange, right, is helping to save lives where patients may have walked for days to reach medical care. Pictured with children is Ian Firkins, a business system manager from Culompton, near Exeter, who helped install the equipment at Chogoria

Hospital. The exchange was donated by BT's Westward District. "It's a fair comment to say this new system will help save lives," commented a medical officer at Chogoria.

■ The world telecommunications network is one of the great human achievements — it serves, for example, 600m telephones and has combined yearly revenues of around \$250bn. There is, however, immense disparity in the extent of telecom services between industrialised countries and the developing world. Over half the world's population live in countries with fewer than 10m telephones between them — and two-thirds of the world population still has no access to telephone services, while Tokyo has more telephones than the whole of the African continent.

In a view which is increasingly echoed by the World Bank, Sir Donald says that developing countries should do more to encourage collaboration that will bring in outside capital to their telecommunications industries.

"There is no reason why these countries should not be able to raise funds through joint ventures," he says. "The reason is that the moment one puts a telephone in, it begins to earn money. Telecommunications is inherently profitable."

The response to these new policies and ideas over the next few years is likely to be patchy. Indeed, the history of the last decade or so shows the variety of different approaches to development that are available in telecommunications. They include:

Combining with this opposition to straightforward aid through the ITU there is a growing body of opinion in support of a different approach to development that are available in telecommunications.

They include:

A more controversial pro-



■ Aggressive expenditure on new switches and infrastructure to push through a crash expansion programme, as in some of the newly industrialised countries (NICs) and the East Asia.

■ Countries such as Singapore and Hong Kong have eschewed manufacturing for themselves, taken advantage of a buyers' market for switching systems, and driven hard bargains with Japanese suppliers for low-priced products.

The NICs have had an advantage over many other developing countries in that they are small, and are therefore able to install their systems relatively quickly; at the same time, they have had more funds available for expenditure because of their growing manufacturing strength.

■ The establishment of a domestic manufacturing industry through joint venture agreements with European, Japanese and American equipment manufacturers.

Mexico, for example, has fol-

lowed this policy with a deal with Alcatel of France. The idea here is to produce overseas-designed equipment locally and thus preserve foreign exchange.

■ A third approach is to try and design a new range of equipment for the local network based on indigenous technology. India currently has ambitious plans of this kind, having already developed a successful range of domestic telephone exchanges.

It is now aiming to invest in production of a new public exchange, called the CDOT, entirely designed by Indian engineers and software specialists.

The idea is that this should be simpler and cheaper to make than modern Western Exchanges, and would therefore be more appropriate to the rapid extension of the telephone system throughout rural India.

■ The development of an indigenous manufacturing sector based on foreign investment but strongly geared to

exports as well as domestic consumption.

Brazil falls into this category, with collaborative agreements with several European and Japanese switch producers; products from these joint ventures are exported to other South American countries and to Africa, taking advantage of the low manufacturing costs in Brazil.

These different strategies allocate resources in various ways between manufacturing and services.

Overall, however, there is a tendency among the larger countries in the developing world to try and develop equipment production activities as well as expanding their telephone network services.

One reason for this is that telecommunications is seen as a high technology industry that will help general technological development; another is to provide employment; and some countries also argue that domestic manufacturing is essential because of the scar-

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a major rival of Mr Li Ka-shing.

Hutchison CableVision includes British Telecom, Cable and Wireless' arch rival for international contracts, with a 24 per cent stake, and AT&T of the US as an advisor.

Also in the group is Hutchison Telecom, which operates cellular and paging telephone services and wants to grow into a major Hong Kong-based Asia-Pacific telecommunications company with European links.

So, with the awarding of the cable tv licence, the scene is being set for competition to begin in Hong Kong's telecommunications, initially only for non-voice services but then maybe for domestic voice as well in 1990.

This led to three rivals emerging, the only viable one being Hong Kong Cable Communications, which has proved a much tougher competitor than had been expected. It includes US West and has been put together by Wharf Holdings, controlled by Sir Y.K.Pao.

Hong Kong puzzle

Continued from page 15

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INTERNATIONAL TELECOMMUNICATIONS-17

Kevin Townsend looks at the dynamic advances in facsimile transmission

The fax phenomenon continues

FROM ALMOST nothing just a few years ago, the facsimile machine has become one of the most dynamic areas in the office market.

The basic reason is simple: fax is easy to use. Unlike the alternative messaging systems (electronic-mail or E-mail and telex), it doesn't require any specialist training – and it also has one specific advantage: Fax can transmit drawings and diagrams, as well as text.

In concept it is very simple: little more than a scanner, a modem, a printer (usually thermal), and the controlling software to make it do as it is told.

The scanner "reads" the contents of a document, the software converts it to fax format, and the modem transmits it to a distant system, that reconstructs the signals and produces a hard copy via the built-in printer.

It is the additions to this basic, the go-faster stripes and the bells and whistles, that differentiates one system from another. For example, many of the newer systems now include a built-in telephone handset, and the ability to store, in some cases, up to 100 or more destination telephone numbers for single-touch dialling.

Automatic timed control, and software-controlled selection can pick up different docu-

ments from an automatic document feeder (ADF) and send them to different addresses overnight – and at cheap telephone rates.

Another new development is the introduction of smaller and sometimes portable fax units – the theory being that every desk should have its own personal scanning fax unit.

Indeed, the Japanese have led the way: the fax unit is already well on its way to achieving this.

However, despite the size and dynamic nature of the fax market, it is unlikely to survive in its current form. The primary threat to the stand-alone – shall we say "scanning" – fax machine has come in the form of the ubiquitous PC board.

The PC fax is effectively a fax unit on a card that slots into the back of a PC, and allows any text held on the PC to be transmitted and printed out at any "scanning" fax machine attached to the international telephone network.

What it does not have is the ability to scan in new original graphics. After a number of false starts, the PC fax is now becoming more useful, and a greater threat to stand-alone scanning systems.

There are both advantages and disadvantages to the fax board. However, its original

market failure was due to a greater understanding of the disadvantages than of the benefits.

It was, for example, initially perceived as a cheap alternative to the scanning fax unit – but one that could only transmit text. But there are many more desktop PCs than stand-alone fax systems; that is, there is a greater market for

The fax is very simple:
little more than a scanner, a modem and a printer

PC-to-PC than PC-to-fax. This means that the fax board is competing more with E-mail than with traditional fax, and E-mail is cheaper and faster than fax.

This inability to transmit graphics stopped the fax board market in its tracks. But now things are different: Comwave, for example, includes new file format conversion routines on its top-of-the-range fax board. The most significant is a PostScript driver.

Now the relevance of this is that PostScript is the rapidly emerging industry standard page description language. It is used to produce the mixture of text, styles and graphics that

is at the heart of most modern desktop publishing packages – and nearly all of the latest word processors, graphics, spreadsheets and databases also include a PostScript driver.

It follows, then, that with such a fax board anything that can be produced by an application package that has its own PostScript driver, regardless of the typeface style or size and irrespective of the degree of graphics, can be sent to a remote scanning fax system for printout.

The methodology is simple. A software application is used to generate an ASCII PostScript file on disk. The fax board conversion routine then converts this file to fax format and transmits it to the remote sys-

tem.

"I see fax, whether fax board or scanning fax," says Mr Martin, "as ideally suited to inter-company messaging. E-mail and file transfer is better suited to intra-company messaging."

But the fax board really comes into its own wherever copies need to be sent to multiple different destinations.

Because the operation of the board is software-controlled, it can be programmed to perform wide-ranging functions. For example, consider the need to get up-to-the-minute information, in a presentable form, to geographically dispersed clients.

This could be anything from an accountant's analysis of the market, through latest prices and stock availability from head office, to a daily price-climat news bulletin.

Traditional mail would take too long and is becoming increasingly unreliable. E-mail would require at least compatible software, and scanning fax would probably require a dedicated operator sending at peak rates.

The fax board, however, could be programmed to send personalised copies to individual clients automatically and at cheap telephone rates.

But the fax board must never become too successful at the expense of traditional fax.

"I don't see us as competing with scanning fax," says Mr Martin. "I see the fax board and the scanning fax as complementary, existing side by side."

This is not surprising since although the board can be seen as a competitor to the scanner, it cannot really exist without scanning fax destinations. There is a danger that too much success will only limit further growth.

fax station.

"No more queuing, waiting, not knowing if that urgent fax has gone or not, whether it was received clearly or if several pages were sent through at once and it needs to be re-sent."

But the fax board has to be used intelligently. For example, its most obvious use is from local fax board to remote scanning fax station.

Although it can be used to send from board to board, this is in many cases irrelevant. If you need to send a message or file from one computer to another, then simple file transfer would be cheaper and more effective.

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But the fax board really comes into its own wherever copies need to be sent to multiple different destinations.

Because the operation of the board is software-controlled, it can be programmed to perform wide-ranging functions. For example, consider the need to get up-to-the-minute information, in a presentable form, to geographically dispersed clients.

This could be anything from an accountant's analysis of the market, through latest prices and stock availability from head office, to a daily price-climat news bulletin.

Traditional mail would take too long and is becoming increasingly unreliable. E-mail would require at least compatible software, and scanning fax would probably require a dedicated operator sending at peak rates.

The fax board, however, could be programmed to send personalised copies to individual clients automatically and at cheap telephone rates.

But the fax board must never become too successful at the expense of traditional fax.

"I don't see us as competing with scanning fax," says Mr Martin. "I see the fax board and the scanning fax as complementary, existing side by side."

This is not surprising since although the board can be seen as a competitor to the scanner, it cannot really exist without scanning fax destinations. There is a danger that too much success will only limit further growth.

communications play an important role, we offer users a wide range of high quality services. These include speech, text and data, as well as video communications.

Major international companies even route their communications via the Netherlands to benefit from all our facilities. Our favourable charges are of course an added attraction.

Changes in the fax equipment market

Purchasers become more demanding

HOW LONG will it take for the word "fax" to enter the hallowed columns of the Oxford English Dictionary? In theory, it might not be so long, because over the past two or three years, as the number of fax machines in use in Britain has soared to well over 400,000, and the word "fax" has well and truly entered the language.

Even when machines carry autodial and other sophisticated features, they are often so user-unfriendly that the features are under-used. As a result, the casual user is unable to use the machines except for the most basic functions.

A growing proportion of high-end machines

are now being purchased because users, probably with a better understanding, seek more features

Furthermore, even the skilled and regular operator may need to refer to the manual each time of use – especially when the feature concerned has to be reprogrammed. This will often apply to "delayed send" procedures aimed at taking advantage of cheap evening telephone rates.

It must be open to question whether there is any point in having features which are claimed to save time or money if they are too complicated for people to use. After all, unlike telephones which demanded a dedicated operator, fax machines may be used in an office by a wide range of staff – and especially so in an open plan environment.

The reality of the marketplace is that margins are being eroded as the growing number of vendors – and dealers who have been discounting heavily to get sales at any price – has generated increasingly intense competition.

Is this good news for the customer? The answer must be yes – until he gets (or appears to have) problems with a machine.

Even comparatively large organisations often only have one fax machine. In the event of any failure they are then out of action until the defect is rectified. However, it is quite pos-

sible that many of these problems result not from machine failure but from users not being able to use the machine properly.

This is brought home by Mr Gerry Tull, Konica's fax manager who says that its Facsimile Centre is able to resolve about 85 per cent of customer problems over the phone.

This is a key indicator to the direction that will be taken with future fax machines. As well as additional features, such as the latest CCITT (the international telecommunications standards body) error detection and correction standard, the main improvements in machines will be aimed at easing use. Instead of cryptic messages, or even no information at all, which sends the user scurrying for the handbook, user-friendliness is becoming an important component in the design of machines.

For example, the trend will be to larger liquid crystal display panels, with information presented in such a manner as to guide the user through the necessary steps to program a machine in an intuitive manner.

Following market research on machine use, Konica is introducing a system which allows the machine to read and automatically act upon required transmission criteria (such as fine resolution, low contrast and so on). The information is marked on a special cover sheet that accompanies the message. Where computer print-outs are sent which need special attention, the same cover sheet can be used each time and consistent results assured.

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Adrian Morant

Eastern European projects

Continued from page 16

Areas earmarked for growth differ: transmission is a priority for all except Bulgaria, satellite ground stations for all except Bulgaria, East Germany and Hungary and private exchanges (PABX) for all except Bulgaria and Poland.

Some countries are easier to do business with. Apart from joint venture regulations, western executives express a confidence for Poland, Hungary, Bulgaria and Romania because they have a history of entrepreneurship, and are convinced that the Soviet Union does not have the capacity to produce the 4.7m telephones a year required.

Nevertheless, the vast demand for all telecoms products overshadows the combined potential of

Comecon countries are easing trade regulations on joint ventures

domestic and export markets available to plants in the satellites of the East. It needs 100m telephones installed by 2000. According to Mr John Murphy, of City solicitors Theodore Goddard, joint ventures will be hard pressed to meet domestic demands in the Soviet Union, let alone be able to export capacity for exports.

The TBC is anxious, saying

mixing satellite and microwave links with more conventional copper and optical fibre cabling.

This approach has been recommended for China, too, where, so the theory goes, vast distances can be conquered by microwave, especially with the frequency sharing technology of cellular technology.

Both exports and joint ventures are subject to the tortuous regulation of Cocom, which authorises the transfer or otherwise of high technology to communist countries.

However, in the four-yearly review of Cocom Listings of September 1988, many classes of telecoms product were taken off the prohibited list.

The net effect was that the regulations were liberalised in respect of transmission equipment, radio relays, optical fibres (although some restrictions still apply) and stored program control switching.

preparing the telecommunications infrastructure for our customers' communication needs after 1992.

We are ready for the new opportunities which will unfold as frontiers disappear and as other countries, on a worldwide scale, evolve to become a single internal market.

Besides our high-quality infrastructure, in which optical fibre technology and satellite

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To stay at the forefront of telecommunications, here and there, we are changing the skyline of our polder landscape. Still we are, as you can imagine, very fond of our windmills.

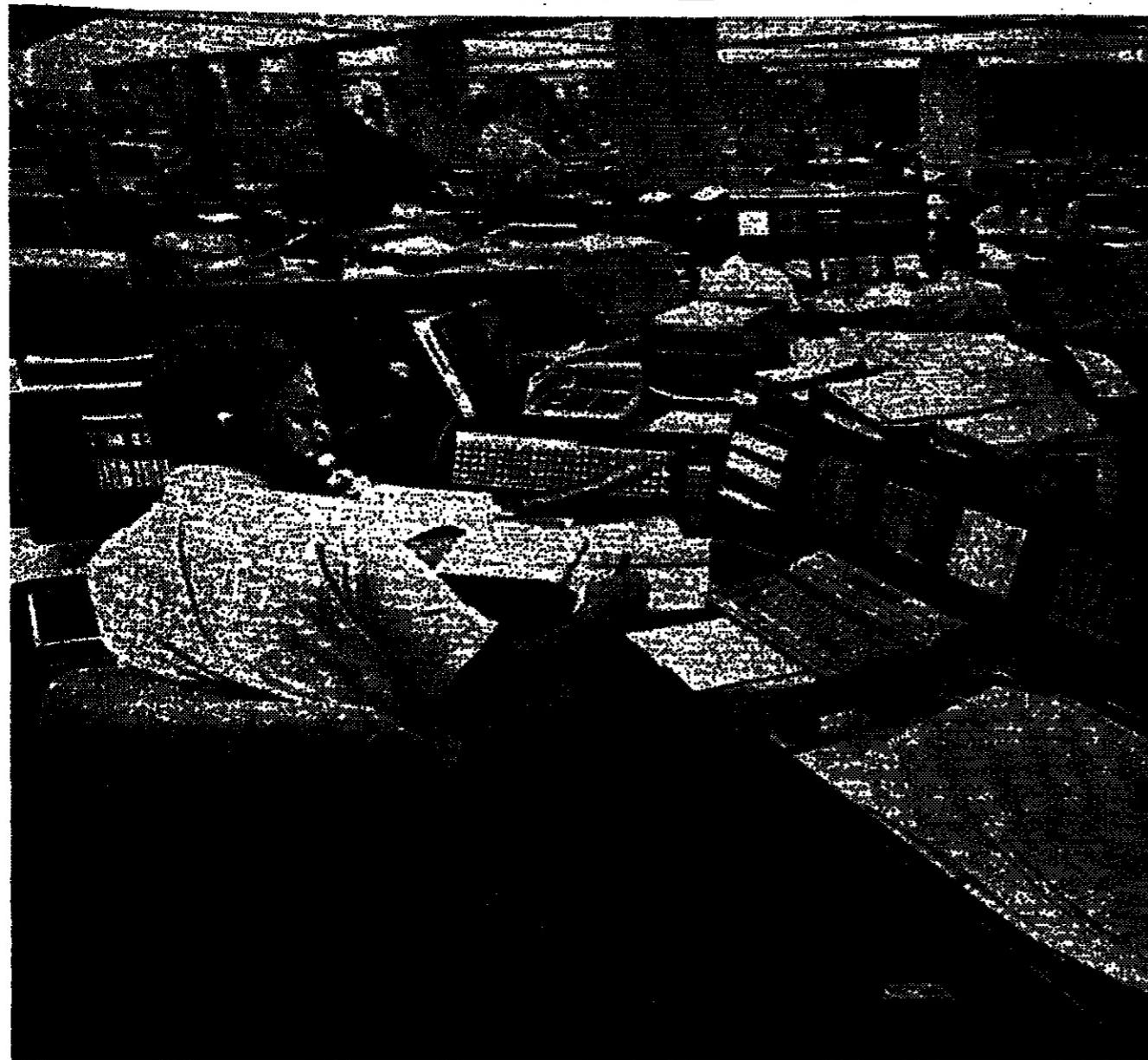
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INTERNATIONAL TELECOMMUNICATIONS 18



Dealers and brokers benefit from electronic mail by gaining the edge in matching buyers to sellers, irrespective of location

Changes in electronic mail systems

Need for compatibility in a more sophisticated network

ELECTRONIC mail systems, such as Telecom Gold and Mercury Link 7500, are the telecommunications equivalents of Post Office boxes in the UK.

A user of, say, Gold is able to send a message from his desktop computer into the Telecom Gold computer. It can then be retrieved by a second user who may be in a distant part of the country or even another part of the world. It only needs his personal computer (pc) and telephone access.

This is possible because each subscriber to a system has a unique address, his mailbox number. The central computer of the system contains a series of electronic mailboxes. Users dial into that computer and, after giving a password, are allowed to access any mail waiting for attention. As well as being comparatively simple to do, it means using the pc and keyboard with which the user is familiar.

At present, the only universal E-mail system is telex which has over 2m users worldwide. However, even

though telex messages have legal status, there are inconveniences caused by the restricted alphabet of upper case letters.

Furthermore, the machines are frequently in the post room and, as outgoing messages have to be keyed in and incom-

The compatibility problem may be resolved as a growing number of these E-mail systems adopt the internationally agreed X400 standards

ing ones delivered to the ultimate recipient, they often do not form part of the "real-time" business.

While some of these problems have been overcome by companies using telex message switches, it is a bit like modernising a manual type-

writer. The proliferation of pcs, the recognition that telex is rather cumbersome, the unsatisfactory postal service, and the increasing tempo of business are all reasons underlying the growing use of E-mail. However, while there is growing numbers of users, they use a number of incompatible systems. This problem will, to some extent, be resolved as a growing number of these E-mail systems adopt the internationally agreed X400 standards for message handling.

While the aim of the E-mail facility remains the transportation of messages around an organisation, this is adequate. However, the whole concept of electric mail is evolving away from just the provision of a rapid person-to-person text messaging service which is independent of that person's location.

It is moving towards being a strategic resource involving the connectivity of more complex data between applications using industry standards rather than the use of incompatible proprietary protocols.

However, the widespread adoption of X400 will not be enough. As any network gets more sophisticated and more heavily used the requirements and expectations for the whole will exceed that of the sum of the parts.

This is especially true if it expands to link what were previously separate "islands" which evolved in a piecemeal manner just to meet individual local goals.

Often E-mail will have been provided as an application on the host computers at the various locations with inter-site communications being handled via one of the public E-mail services.

According to Mr Alan Wallman, managing director of Key Exchange, a leading European supplier of information interchange systems, "Businesses now recognise that they need a corporate network approach to electronic mail which addresses the important issues of connectivity, management and mail-based applications."

Nowhere is communications more critical than with the financial community where a failure could leave a dealer dangerously exposed.

The issues are complex. When a network is being planned to embrace an entire organisation there is frequently the problem that it is not a "green field" situation.

The company often has a large investment in an IBM SNA network which has evolved to provide a high level of reliability and availability. In a view commonly propounded within industry, the organisation should rapidly migrate to international OSI (Open Systems Interconnect) systems.

Those who have operational responsibility, seek a more evolutionary, and less traumatic, approach for both users and the system - especially as they are in the firing line if the system goes down.

The company claims to hold a unique position in the IT marketplace as the leading European supplier of solutions to large organisations with incompatible E-mail and document processing systems.

Shortly after it was founded in 1986, it broadened its product portfolio by acquiring a controlling interest in the UK subsidiary of the US-based Soft-Switch.

Adrian Morant



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Advances in Electronic Data Interchange (EDI)

Charting the progress of paperless trading

IT HAS become accepted that the "paperless office" has not become a reality because it was a dream, based on faulty assumptions. But "paperless trading," known as electronic data interchange (EDI), is fast gaining ground as an accepted way of doing business.

EDI is used to replace paper-based orders, invoices, freight-and-forward notices, and Customs documentation with networked computer-based systems.

Savings are derived through reduced paperwork, less manpower, and most significantly, a reduction in error - due to once-only keying-in of basic information.

According to a Yankee Group report, over 70 per cent of European EDI activity is based in Britain which has over 2,500 companies involved.

It predicts that EDI will grow at a rate of 30 per cent for the next five years. The US, meanwhile, has by far the largest base, with over 7,000 users.

Typically, EDI networks have been developed within specific market areas:

- Retailing
- Automotive industry
- Shipping
- Insurance
- Pharmaceuticals

British Coal is an EDI pioneer. It started a pilot project in 1982, linking 12 of its leading mining machinery manufacturers, to exchange orders, invoices, lead-time prices and listings of critical spares.

The pilot project was deemed to have worked so well that the system was extended to operate via a clearing house and now links 148 users.

Mr Bill Bennett, head of purchasing and supplies, says that the network has met the need for greater accuracy and cost-cutting - "It has been highly successful and now we are able to order stock later, hold less stock, and save on administration overheads," he says.

British Coal's EDI network processes 32 per cent of its purchase orders (\$12,000) and 12 per cent of its invoices (\$10,600), each year. It expects this to increase to 50 per cent and 25 per cent respectively by the end of the year.

These include IBM's PROFS, DISOSS, and AS/400; DEC's All-in-1 and VME Mail; Wang's Office and MailWay; Banyan's Mail; and Network Courier Mail.

The continued operation of this network is vital to the operation of the bank.

The bank has been installing over the past two years a Soft-Switch network to link all its dealers and branches and the rest of the 20,000 electronic messaging users.

The result being that, without users having to learn new incarnations, messages are

Key Exchange is responsible for the European end of Chase Manhattan Bank's worldwide network upgrade in which it is investing about \$500,000 with Soft-Switch.

This is an example of the real world. Its three main centres are in New York, London and Hong Kong and it has an installed base of IBM, DEC and Wang machines. Over the years a number of proprietary messaging systems have been implemented.

These include IBM's PROFS, DISOSS, and AS/400; DEC's All-in-1 and VME Mail; Wang's Office and MailWay; Banyan's Mail; and Network Courier Mail.

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Businesses recognise the need for a corporate approach which addresses issues of connectivity, management and mail-based applications

transmitted across the world between all E-mail systems without delay. This gives the bank the competitive edge in matching buyers to sellers, virtually irrespective of where they are located.

As part of its strategy to enhance its communications the bank has added a gateway in the US to the MCI International messaging services as well as being a "beta" test site for Soft-Switch's X400 electronic mail products which will provide Open Access. This enables it to provide direct E-mail access with customers and so enhance its response time still further.

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Those who have operational responsibility, seek a more evolutionary, and less traumatic, approach for both users and the system - especially as they are in the firing line if the system goes down.

It sells you who's likely to be around in five years to support the systems supplied today. Candid case studies enable you to profit from the experiences of others.

the finance industry. The project, if successful, will be one of Europe's largest EDI networks with 50 cities linked by the end of this year, generating an income of \$3.5m per year.

UK-based Electronic Data Systems (EDS) is planning what could become the world's largest EDI network. The system will link seven European countries, with up to 2,000 companies to be connected by EDS's parent company, General Motors, to parts-making suppliers to manufacturing plants.

The United Kingdom has become something of an EDI trail-blazer due to liberalisation of its telecommunications and the ease with which value-added network suppliers can be set up.

The EC is concerned that small to medium-sized enterprises do not miss out on the opportunity available.

In a bid to extend the viability of EDI, it has commissioned Price Waterhouse management consultancy to undertake a study of the needs of SMEs to whom EDI funding will be made available for equipment and service costs for firms of four companies in three different market sectors.

"The aim is to stimulate small to medium-sized enterprises to act more proactively, using EDI competitively and encouraging customers to do the same," says Price Waterhouse partner, Mr Glen Peter.

The pilot project was deemed to have worked so well that the system was extended to operate via a clearing house and now links 148 users.

Mr Bill Bennett, head of purchasing and supplies, says that the network has met the need for greater accuracy and cost-cutting - "It has been highly successful and now we are able to order stock later, hold less stock, and save on administration overheads," he says.

But the rest of Europe is beginning to catch up. In France, for example, the national datacomms network operator, Transpac, is seeking to be a major player in the European EDI arena.

Transpac will be the project manager of a national EDI network called TEDECO, which will link 1,000 of the country's largest towns and cities with

Due for completion within two years, the project will be jointly run with Gelsen, Transpac, and Ital, which already claim to have the largest transhipment base in Britain.

Further afield, there are numerous embryonic EDI projects being developed. In Australia, for example, the current focus is on using EDI to handle importing and exporting details. The network, called Tradeplus Australia, is expected to link 3,500 terminals within five years.

In the Soviet Union, the first EDI project is under way. Based in Leningrad, it will be used initially for military communications and cargo shipments - and later for messages between ports and railways.

As more companies see the benefits that EDI can bring, there is growing belief that its use is of major importance.

Consultants point to a number of areas which directly affect EDI:

- Just-in-time manufacturing systems
- More efficient distribution
- Organisational changes
- Redistribution of labour
- Competitive edge technology areas

The leading computing manufacturers recognise the obvious potential for selling hardware on the EDI "ticket" and

Kenneth Young

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Marketing Manager, Digital Media, Chichester, West Sussex.

Alan Morrison - Head of Computer Systems, BT

Marketing Manager, Digital Media, Chichester, West Sussex.

INTERNATIONAL TELECOMMUNICATIONS-19

**Laying and cutting cables on the sea bed**

■ Alan Law, above, chief cable engineer on board the Cable and Wireless ship, "Sir Eric Sharp", pictured on deck with the submersible equipment which is used to lay and cut telecommunication cables on the sea bed.

■ In the control room, right, Peter Minns, operates the highly-sensitive manipulator system, guided by television pictures. Each movement he makes on the controls is reproduced on the sea bed by the arms on the submersible equipment.

Pictures by Tony Andrews



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■ In the control room, right, Peter Minns, operates the highly-sensitive manipulator system, guided by television pictures. Each movement he makes on the controls is reproduced on the sea bed by the arms on the submersible equipment.

■ Pictures by Tony Andrews

Adrian Morant charts the rapid increase in world telephone traffic

More powerful exchanges to meet peak demand

WITH THE telephone assuming a position of even greater importance as the tempo of business increases, how will the telephone exchanges be able to cope? For example, British Telecom reported that last year there were 11, 11, and 18 per cent growths in inland and international calls respectively.

Not only must the telephone companies ensure that exchanges can cope with the increasing demands from users, they have to bring their systems into the modern digital era for ISDN and Intelligent Network services.

To meet these demands the telecommunications manufacturers are designing more powerful exchanges. GPT (GEC Plessey Telecommunications) last month claimed a world record — which will be submitted for inclusion in the Guin-

GPT last month claimed a world record — which will be submitted for inclusion in the Guinness Book of Records

ness Book of Records — when a System X carried 1.5m "busy-hour call attempts" (BHCA) or 415 call attempts per second.

But what does that mean, and why is it of interest to the customer?

One of the major measures of the performance of a telephone exchange is the number of call attempts that it can handle in one hour. In the same way that road traffic fluctuates during the day, so does telephone traffic. In both cases, the system must be designed to accommodate the peak demand i.e. the traffic at the "busy hour" — hence, the capacity of a telephone exchange is measured in BHCA figures.

It is very difficult to visualise the load on a switch, or even to put it into understandable terms. Current generation digital switches can typically handle 500,000 BHCA with only one or two types having a claimed capability to handle a million BHCA.

A number of busy nodes carry around 350,000 BHCA on a regular basis in city centre type local applications and as trunk exchanges in the long distance network. Consequently, it may appear as if GPT is just advertising a 200MPH sports car with go-faster stripes for use where there

is a 70 MPH speed limit.

This is not the case in view of the sudden and unexpected loads that can be imposed on a network by a disaster (as apart from, say, telephone voting by TV viewers of programmes such as "Opportunity Knocks" or "New Faces" which are sudden surges — but at least they are anticipated). But, irrespective of the cause, the network must withstand the heaviest loads.

However, according to Mr John Ziemiak, GPT director of engineering and business centres, the real benefit of processing power will become evident as the telecoms services industry takes off in the 1990s.

As supply of telephony services is deregulated, then more and more suppliers will enter the market with differentiated products. He cites the fact that there were over 5m 0300-type

calls in the US in 1987. System X is of a modular design based around a number of "clusters," which can be increased to accommodate higher traffic demands. This multi-cluster approach enables the processor to be enhanced from one-to-eight clusters without any hardware replacement. Each one can cope for around 250,000 BHCA. Thus, a machine can be assembled having the required amount of processing power.

The demonstration carried out last month was on a six-cluster System X exchange, i.e. a capacity of 1,500,000 BHCA, at the GPT site at Nottingham. However, in view of the fact that this amount of "real" traffic is not yet available, special traffic simulators were used to generate pseudo-traffic. (In due course, an 8-cluster 2m BHCA system can be expected.)

Even without the move towards the advanced services, there are two reasons why increased processor throughput is needed; the increased demand for telephone services of all types, and a reduction in the average holding-time of each call.

Prior to the introduction of the new generation of equipment, a significant proportion of the total call time was spent setting up the call. With digital telephones, there will not be the time taken by pulse dialling and the call is set up instantly.

As we move towards intelligent networks, the amount of processing power required per call will continue to increase

Additionally, the data transmission rates used within the network are increasing. Thus the call duration needed to transmit a given amount of data is reduced.

This will be taken to the limit with applications such as credit card processing. Here, the card will be "wiped" through the reader which will automatically dial through to the card company where a computer will instantly check

whether or not the card is "good".

Similarly, the entire call to send an A4 page via a high speed Group 4 digital facsimile will only take about five seconds.

Today's digital telephone exchanges can also provide Centrex service. This obviates the need for a company to have its own PABX as all the facilities are provided by the telephone exchange. This is space saving and gives the company great flexibility in catering for changing needs. These additional facilities place an extra load on the processor.

At present, multi-sited companies frequently have private networks with leased lines linking their establishments in different parts of the country.

These leased lines are expensive. Consequently, the concept of the virtually private network is attractive because it enables the use of leased lines to be shared and so maximises their utilisation to the benefit of both supplier and user.

As we move towards intelligent networks, the amount of processing power required per call will continue to increase

gent Networks (IN), the amount of processing power required per call will continue to increase. The IN of the future will provide a wide range of features including wide area Centrex (spanning a number of sites); multimedia services to facilitate the integration of voice, text, graphic and even video information; and personal communications services.

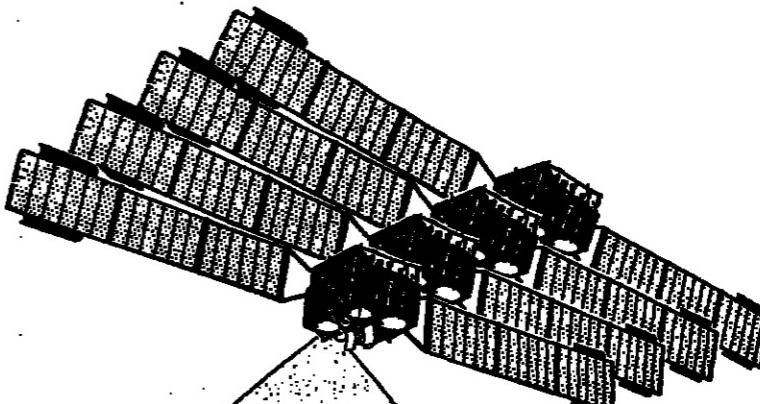
These latter facilities customise the subscriber's interface with the network to allow, for example, the retention of the same telephone number even when one changes geographic location, or "name dialling" whereby the subscriber places a call by speaking or typing a name rather than dialling a telephone number.

Only manufacturers who can demonstrate large amounts of processor power can be relied upon to provide the network operators — who will be operating in an increasingly competitive environment — with a future-proof system to meet these emerging market requirements.

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This control centre, recently opened in London, has the world's latest colour station for pinpointing potential trouble spots and taking swift action before service to customers is ever affected, either nationally or abroad. Maps and other displays give staff sitting at consoles a continuously updated picture of the state of the network, showing the flow of calls through it. On adjacent screens, TV programmes are continuously monitored to check for possible faults or damage to screens.

Case study: developments in Hull

City's digital network offers cheapest calls in UK

A TELEPHONE in Hull, in the north east of England, looks no different from any other telephone, but behind the scenes is one of Europe's most advanced digital telephone exchanges.

Local, national and international calls are handled by the city's System X network, the first installed in the UK, in 1984, 30 years after the opening of Hull's earliest exchange.

Hull was one of 13 local authorities in 1982 to obtain a licence to operate its own telephone service. Only six actually started a service and Kingston Communications is now the country's sole surviving independent PTO. Though recently made a p.t.t., the city council remains its only shareholder.

The company has so far

invested over £20m on the modernisation of the network, serving over 180,000 telephone users in its 130 sq km licensed area, an investment financed partly by a European regional development grant of £7.5m.

Today, 75 per cent of all customers and 94 per cent of its 25,000 business lines are connected to the digital network, with complete coverage expected by 1991.

The digital network has brought a number of advantages to its customers, claims the company, including improved transmission quality, less congestion and low fault rates. The company has developed a number of its own applications for use with the network. It was the first PTO to offer bundled billing, for example.

In addition, local calls are

cheapest in the UK. Callers can stay on the line as long as they like for a fixed charge, or can opt to pay a flat rate for any number of local calls of any duration without any further cost.

Customers calling outside the Home area can also choose whether to route their call through BT or Marconi.

The company is now building on the System X technology, currently running a trial of the Integrated Services Digital Network system, allowing voice, data and image to travel down the same telephone cable.

It plans to offer some ISDN services to the public before the end of the year.

As a public limited company it is now free to extend non-regulated activities such

as system and business equipment sales, outside its designated network area. It is a freedom that the company intends to fully exploit.

In May, for example, it announced details of a joint response with Plessey to the DTT's discussion document, Phone on the Move. The two companies gave their proposals for a national Personal Communications Network to commence in 1992, based on advanced radio technology.

The network would allow individuals to access all telecommunications services via their own personally numbered, pocket-sized, lightweight handset, from anywhere in the UK.

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INTERNATIONAL TELECOMMUNICATIONS-20

Paul Taylor highlights advances in value added network services

A revolution in global data transmission

FOR THE best part of the century since Alexander Graham Bell's telephone was demonstrated in Philadelphia in 1876, its basic function - to carry individual voice messages long distances over a metal wire - changed hardly at all.

Similarly, the suppliers of telephone services barely altered; they were mostly state monopolies run by civil servants or giant monolithic enterprises like AT&T of the US.

But in the last few decades this sedate world has begun to change out of all recognition. Forcing the pace has been technological advances, particularly the advent of widespread computer usage creating the need to transmit vast quantities of data around the globe, and dramatic moves in the regulatory environment.

Today, we are in the midst of a telecommunications revolution as voice, data and image communications converge and new regulatory structures develop to facilitate greater competition.

Nowhere is the impact of these changes more apparent than in the emerging market for value added network services - or Vans in telecommunications jargon.

Clear definitions of what constitutes a Vans are difficult to establish but the general regulatory authority ground rule is that they represent services that use the basic telephone network to manipulate information in voice, video or data form.

Most Vans involve the handling of data rather than voice. They include on-line electronic information services such as like Reuters' processing services like air-line reservation systems, inter-banking systems and electronic funds transfer, messaging services such as like electronic mail and electronic data interchange, and managed data networks.

As such, they are in the vanguard of the move towards the information technology-driven society of the future.

Among the factors which are spurring the growth of Vans has been the need of companies to capture and deliver real-time information electronically across a telephone line, particularly in the banking and

finance sector, and the growth of the use of computers which has led to the demand for electronic messaging systems. (Why pick up the telephone and use voice communications to convey a message when the information is already sitting on a computer screen?)

Computer messages can be stored if the intended recipient is unavailable, they can be sent to multiple destinations, and they are generally faster, and therefore cheaper, than voice communications.

Such electronic mail systems range from in-house networks (not strictly Vans, unless they are tied to public systems) like IBM's system which links together its 350,000 worldwide employees, to public access systems such as Telecom Gold, run by BT.

While early predictions for the size of the electronic mail market have proved over optimistic, growth has nevertheless been impressive. Frost & Sullivan, the market consultants, suggest electronic mail box services in Western Europe generated revenues of \$514.5m in 1987 and are fore-



Ian Hamilton, British Telecom project engineer, carries out tests on M1500 computer terminals.

cast to rise to \$1.5bn in 1992 led by the UK and the Nordic countries.

Although it is unlikely that electronic mail will replace traditional forms of personal communication in the foreseeable future, Frost & Sullivan suggests old-fashioned telephone calls and letter-post will still account for 85 per cent of personal communications in 1992.

— moves towards interconnecting corporate in-house mail systems with each other and with public networks, could remove a major barrier to future growth.

Substantial growth is also likely in electronic data interchange systems which enable companies to exchange orders and bills electronically in standard formats.

While the most widespread use of the telephone system for data transfer remains within the large private networks run by multinational corporations the potential for ordering, in-

voicing and billing between companies electronically rather than by using pieces of paper is potentially huge.

Thus, EDI systems pioneered in the transport, retailing, and insurance industries are likely to proliferate as companies take advantage of new services to improve efficiency and cut costs.

Some governments, including those in the US and UK, have actively promoted the development of Vans because they believe such services will improve corporate efficiency and international competitiveness.

However, the development of sophisticated telephone information services internationally has been hamstrung by regulatory problems and the failure of the telecommunications authorities to facilitate international data transfer over public networks, particularly in Europe where many governments have sought to protect local telephone service monopolies.

Now, under the impact of commercial pressures, technological advance like the introduction of Integrated Services Digital Network equipment, and an increasingly interventionist competition stance by the European Commission this too could be changing.

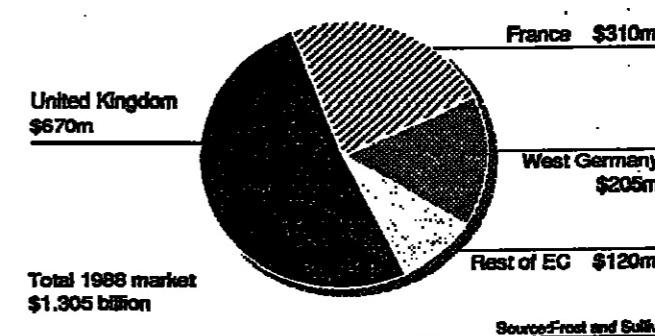
Ahead of the introduction of the single European market at the end of 1992, the European Commission has initiated a series of controversial moves aimed at both harmonising and liberalising the telecommunications marketplace.

At the centre of these re-regulation moves is the Commission's drive for an Open Network Provision and a separate telecommunications services directive.

Last month, in a clear attempt to step up its attack on monopoly services, the Commission spelt out detailed new rules aimed at allowing private companies to provide value added services by the middle of next year and to offer their own basic data transmission services by the start of 1993.

These developments are likely to be fiercely contested by some EC member-governments such as France, Belgium, Italy and Spain which resent not only the content of the Commission's latest plans but also the way in which Brussels is

Communications, information and processing market in Europe



Source: Frost and Sullivan

proceeding.

Such opposition could further delay efforts to agree a common competitive framework for value added services although Sir Leon Brittan, the EC Commissioner in charge of competition, has made it clear that while basic voice telephony should be protected, other telecommunications services must be opened up to newcomers.

Such regulatory changes, together with similar moves in

Technologies of voice, data and image communications are converging

the General Agreement in Tariffs and Trade, suggest to some

like Mr Christopher Thomas,

managing director of consultants Systems Dynamics, that the old distinctions between basic and value added services are likely to become even more blurred in the 1990s and that a more sensible distinction will lie between reserved and non-reserved services where telecommunications authorities monopoly is confined to basic transport only.

Few industry analysts doubt

that barriers to competition in Vans will eventually tumble,

even in countries like West Germany where the government is instigating change and following EC policy, even though the Bundespost is resisting.

But there is still much uncertainty over the pace of liberalisation.

In the end, the pace could be

determined as much by commercial factors as by political

enable them to capture the bulk of the emerging market for advanced ISDN terminal equipment.

In the Vans market, analysts predict there will be two kinds of players, global, and niche market players - local companies supplying domestic needs. As the market develops, a process of rationalisation is likely to happen.

There is some evidence in the UK that this is already happening. While Vans suppliers such as Iritel, the former Rover Group subsidiary bought-out by its employees, provides a range of electronic data interchange, viewdata and electronic mail services two of the biggest value added service providers are US-based multinationals, IBM and Geisse GE subsidiary which has formed the INS joint venture with the UK's ICL computer group.

BT, through its acquisition of Dialcom, also appears determined to become a major international Vans supplier.

"The risks of entering the telecommunications networks services or Vans marketplace

The sedate world of traditional 'phone services is changing out of all recognition

are great and many of the players will fail or become part of a larger organisational structure through merger, acquisition or joint venture," said Mr Thomas of Systems Dynamics in a paper delivered earlier this month. "Such changes will characterise the industry throughout the 1990s."

He added, "for the user, the situation is equally fraught. Needing to improve his trading position and seeking security of supply, the attraction of buying service from an established and stable international vendor will be compelling."

What does appear certain is that the plain old telephone service - or "Pots" - as one consultant waggishly once called it, will continue to grow, but that sophisticated value added services, provided on a global basis, will evolve in a way that would have astounded even the telephone's inventor.

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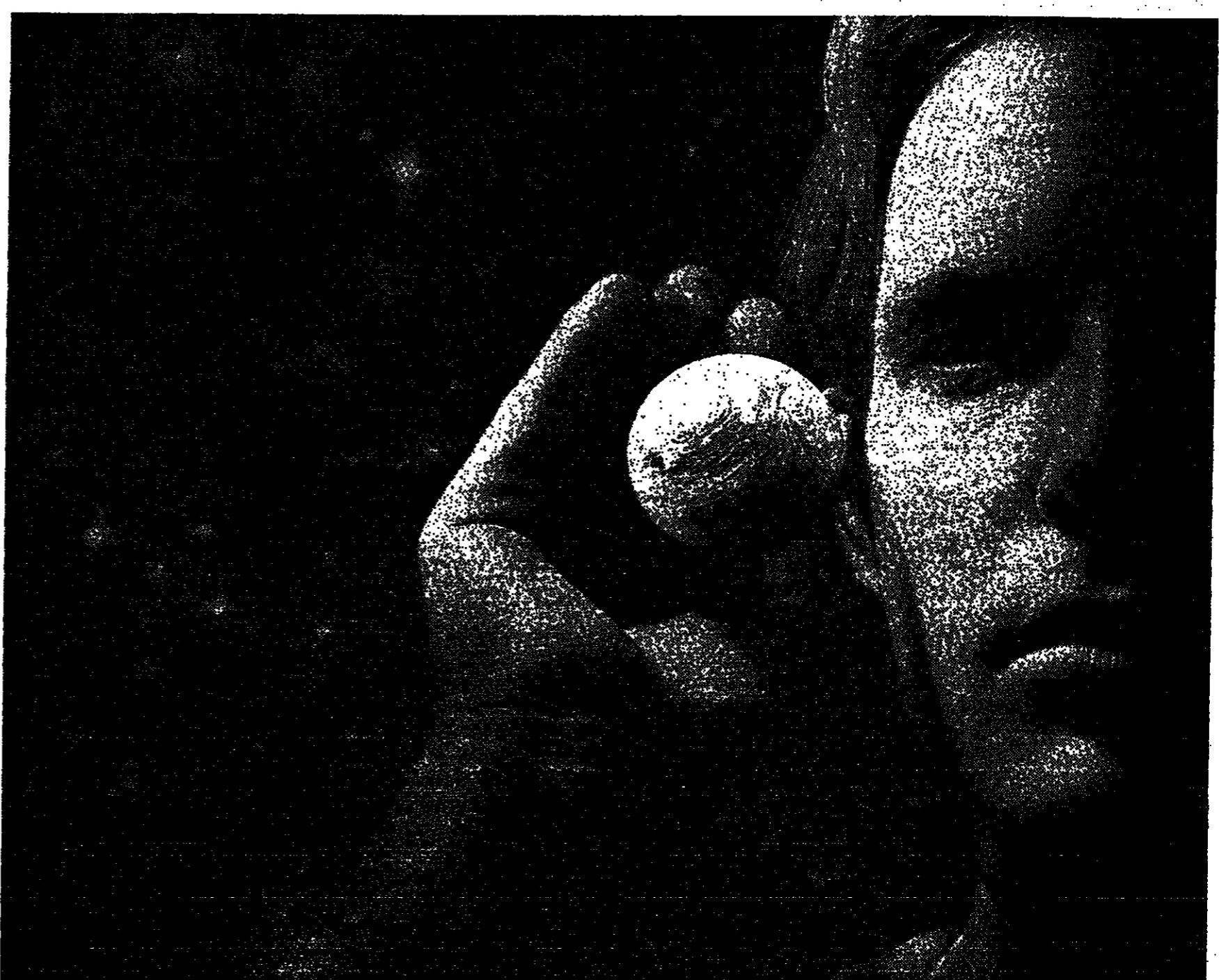
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INTERNATIONAL COMPANIES AND FINANCE

Good quarter for US drugs groups

By Karen Zagor in New York

WARNER-LAMBERT, the US pharmaceuticals and non-prescription health products group which produces Listerine, yesterday reported a 22.6 per cent increase in second quarter net earnings to \$112.4m or \$1.66 a share against \$91.6m or \$1.35 a year earlier.

Revenues rose 8 per cent to \$1.02bn from \$951.3m. For the first half, net income jumped 21.9 per cent to \$212.4m or \$3.15 cents a share from \$175.1m or \$2.57 the previous year. Sales advanced 8.7 per cent to \$2.04bn from \$1.85bn.

"This continues to be one of the strongest periods of sustained growth in Warner-Lambert's history," said Mr Joseph Williams, chairman and chief executive.

He added that each of Warner Lambert's major businesses — ethical pharmaceuticals, over-the-counter health care products and confectioneries — contributed to the recent gains.

AECI confident after smart first-half gain

By Jim Jones in Johannesburg

AECI, South Africa's largest diversified chemicals group, lifted sales by a quarter in the six months to June and profits benefited from rationalisation on the domestic fertiliser side.

First-half turnover increased to R2.26bn (\$830.1m) from R1.81bn and the pre-tax profit was R222m against R142m. Mr Mike Sander, the chairman, says domestic sales volumes rose by 10 per cent helped by the introduction of additional capacity at the Complex plastics plant and the acquisition late in 1988 of a competitor's fertiliser interests.

He believes earnings will increase further during the second half of the year provided there is a reasonably stable business environment in the industrial and mining sectors. He warns, however, that the profit growth rate of 1988 is unlikely to be repeated.

Net earnings increased to 94 cents a share from 61 cents and the interim dividend has been lifted to 30 cents from 25 cents. Last year's full earnings were 165 cents and the dividend totalled 75 cents.

Worldwide sales of the company's ethical pharmaceuticals products rose 9 per cent in the quarter to \$323m, led by the cardiovascular drugs Lipid and Dilzem. US sales for the sector jumped 10 per cent.

Worldwide sales of non-prescription health care products rose more than 6 per cent to \$316m. Confectionery sales advanced 11 per cent to \$250m, led by Trident sugarless gum and Clorets gum and breath mints.

Upjohn, the US pharmaceutical company which recently started marketing its anti-hair-loss drug, Rogaine, also reported improved second quarter earnings.

Net income improved 8 per cent to \$94.5m or 51 cents a share from \$87.5m or 47 cents. Sales rose 2.1 per cent to \$736.5m from \$701.5m.

For the first six months, net income was up 7.8 per cent to \$197.5m or \$1.07 a share on sales of \$1.49bn from \$1.32bn.

treatment for hair loss."

American Home Products, another leading manufacturer of prescription and ethical drugs, reported a 10 per cent increase in second-quarter net income to \$226.7m or \$1.61 per share against from \$215.8m or \$1.48 the year before. Sales rose 2 per cent to \$1.4bn from \$1.37bn.

Total US sales for the quarter rose 5 per cent to \$454m. Foreign sales, which accounted for 38 per cent of consolidated sales, fell 3 per cent to \$233m. Overseas sales were hurt by the strong dollar. Consolidated sales were helped by a 5 per cent price rise.

The company hopes to benefit from a US Food and Drug Administration ruling which prohibits companies from making unsubstantiated claims that their over-the-counter products can grow hair or prevent hair loss.

Mr Theodore Cooper, chairman and chief executive, said: "This action by the FDA reinforces our position that Rogaine is the only scientifically proven

method to treat hair loss."

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For the first half, net income rose 11 per cent to \$500.5m or \$3.41 cents a share from \$452.9m or \$3.10 cents a year earlier. Sales were \$2.92bn against \$2.76bn.

Net sales of health care products rose 1 per cent for the quarter and 4 per cent for the first six months. Sales of food and household products rose 6 per cent for the quarter and 8 per cent for the first half.

The New York company said sales for the quarter were held up by unfavourable exchange rates for foreign operations. However, this was partially offset by cuts in foreign tax.

Comit link set to go through

By John Wyles in Rome

MR ROMANO PRODI, chairman of Iri, the Italian state holding company, appears to have mustered enough votes to secure board approval today of the exchange of shareholdings between Banca Commerciale Italiana (Comit) and Paribas of France.

The deal was surprisingly blocked three weeks ago after representatives of four of Italy's five governing parties abstained on the grounds that a study was needed of BCI's overall strategy.

Iri has a 55 per cent stake in Comit and will be surrendering a 2 per cent block through the deal with Paribas. BCI is to acquire its Paribas shares in the open market.

Yesterday, both Liberal and Social Democratic Party spokesmen said their representatives would be voting for the deal today and the Republican nominated is also expected to follow suit.

Mr Massimo Pini of the Socialist Party, the most frequent opponent of Prodi initia-

tives, also said yesterday that the Iri chairman would have to resign if he lost today's vote. It is still not altogether clear why the political nominees abstained at the last meeting. Mr Pini appears to have quietly withdrawn his opposition to the Paribas agreement and the first step.

This is despite the fact of a formal Iri board decision that the holding company's stake will not be allowed to fall below 51 per cent.

Write-off hits Intel profits

By Louise Kehoe in San Francisco

INTEL, the US semiconductor manufacturer, plans to close one of its manufacturing plants in California, taking a charge against second-quarter earnings, which were reported yesterday.

Net income in the quarter was \$99m or 53 cents per share against \$130.7m or 73 cents in last year's second quarter. Revenues were \$747m, up from \$737m a year earlier.

This year's second-quarter earnings were reduced by a com-

pany's oldest. The 400 people employed at the Livermore plant will be offered jobs elsewhere in the company, Intel said.

Intel's stock fell from \$31% to \$29 in heavy trading on the profits news.

For the six-month period, revenues rose to \$1.5bn from \$1.4bn. Net income was \$196.3m or \$1.06 per share compared to \$224.4m or \$1.27 per share in the same period last year.

\$17m pre-tax charge to cover costs associated with the planned closing of the company's wafer fabrication plant in Livermore, California.

The company said orders received in the second quarter were up from those in the first quarter and that new orders for its latest microprocessors were particularly strong.

Commenting on the plant closure, Dr Andrew Grove, president and chief executive, said the plant was the com-

WH Smith to buy Waterstone for £42m

By Maggie Urry in London

W.H. SMITH, the UK retailing group, is to increase its share of the British book market

from about 17 to 20 per cent through a phased deal to buy the Waterstone's chain of book shops for at least £42.2m (£65m).

Smith is to merge Sherratt & Hughes, its own specialist book shop chain, with the Waterstone's chain. The Sherratt & Hughes shops will take the Waterstone's name and the merged company will be chaired by Mr Tim Waterstone.

He founded Waterstone's in 1982 after being sacked by W.H. Smith and he has built it up to a 30-shop chain noted for good design and service and a wide range of stock.

Mr Waterstone said he had decided to sell the business because it could not fund its fast rate of expansion internally. Smith approached him on May 22, he said, with a "very skilfully prepared offer" and negotiations were rapidly concluded.

The merged business will be 50.5 per cent owned by Smith and 49.5 per cent by Waterstone, the company which owns the Waterstone chain.

Smith is buying up to about one third of Waterstone now, with an offer of 350p a share, totalling up to £9.3m, and it has agreed to buy the rest of the company for a minimum of 480p a share in 1992 or 1993, valuing the group at at least £42.2m. Waterstone shareholders could receive more than that, depending on the the profitability of the merged company.

Mr Waterstone himself bought shares in Waterstone at 4p, and holds 23 per cent of the company. The venture capital group it came in at a price of 10p, and under the Business Expansion Scheme many investors bought in at 14p, net of tax relief.

Sherratt & Hughes has 48 shops, and its turnover in 1988 was £28.5m, with pre-tax profits of £1.7m. Waterstone has 30 shops, which are larger than the Sherratt & Hughes ones. Its turnover was also £28.5m but it made a loss of £2.5m in 1988.

"We have turned the corner," Mr Woitschäk told the annual shareholders' meeting, although he made no exact profit forecast.

Drastic cost cuts, trimming the product range and cuts in warehouse stocks were responsible for improving Puma's

Banesto takes Portuguese partner in Banco Totta deal

By Diana Smith in Lisbon

BANESTO, Spain's third largest bank, has lined up with a new Portuguese group headed by the financier Mr Jose Roquette to acquire a substantial shareholding in Banco Totta e Açores (BTA), the Portuguese state-controlled bank which sold 49 per cent of its capital to the public earlier this month.

BTA, nationalised in the 1970s, is to merge Sherratt & Hughes, its own specialist book shop chain, with the Waterstone's chain. The Sherratt & Hughes shops will take the Waterstone's name and the merged company will be chaired by Mr Tim Waterstone.

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seat on BTA's new board.

According to Mr Abad, Banesto and the Roquette group will now form a holding company which will not only handle their BTA acquisition but will in future look for other opportunities in Portugal, possibly in the industrial area, and serve as a springboard to develop new products for BTA, including brokerage and other services.

It is understood that BTA is quite receptive to the idea of an association with Banesto. The alliance might also permit the Portuguese bank to penetrate the Spanish market and even take shares in future in Banesto if so desired.

Banco Hispano-Americano also tried to acquire a sizeable enough share of BTA to permit it to form an association similar to the one contemplated by Banesto.

But the combined forces of Mr Roquette and Banesto were too much for it. This bank is likely to try again when other Portuguese nationalised banks are privatised in the next couple of years.

UK footwear retailer accepts Clayform bid

By Philip Coggan in London

STEAD & SIMPSON, the UK footwear retailer, yesterday agreed to a £120m (\$194m) cash takeover by Clayform Properties, just a year and a day after narrowly escaping a hostile bid from the property group.

Mr Peter Gee, Stead & Simpson's chief executive, said that "a lot of things are said in the course of a hostile bid but since then we've had a chance to sit down and talk to the Clayform people."

Clayform offered £108m for the group last year. However, non-voting "A" shareholders in Stead & Simpson are only being offered 15p per share, plus a 6p net dividend paid from Stead & Simpson's own resources, as against 15p last year.

Voting shareholders are being offered £21.55p per share, compared with the previous £14.50.

This announcement appears as a matter of record only

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INTERNATIONAL COMPANIES AND FINANCE

Futures trading offsets higher costs at Anglovaal

By Jim Jones in Johannesburg

PROFITS from hedging have helped the three big gold mines managed by the Anglovaal group of South Africa to overcome some of the disadvantages of reduced production and higher costs.

The house is the only one of the country's mining groups to trade actively in futures markets and, at present, its strategy is to enhance gold revenue should the metal's spot price remain below \$400 an ounce during the present quarter.

The group's produced less gold during the June quarter than in the three months to March. It fell mainly because Hartebeestfontein, the largest mine, suffered a drop in gold recovery grade which was not offset by a higher underground

output per kg... with the result that revenue rose faster than costs.

Anglovaal is evaluating a new mining prospect to the north of Lorraine and expects to decide on its viability by the end of the year.

Indian vehicle maker opts for Peugeot technology

By R.C. Murthy in Bombay

MAHINDRA and Mahindra, India's only maker of Jeep-like all-terrain vehicles, has opted for Western automotive technology despite its access to Japanese know-how through its absorption of Alwyn Nissan, a light commercial vehicle maker in Andhra Pradesh.

Mahindra is strengthening its ties with Peugeot by offering the French company 5.3 per cent of its equity through a convertible bond issue later this year. Peugeot has supplied engine technology for Mahindra and is now offering knowledge for local production of pick-up trucks and other light vehicles, India's fastest growing automobile segment.

This is the first Western collaboration in light commercial vehicles after the recent Japanese wave that swept the Indian automobile industry. Half a dozen Japanese companies, including Toyota and Mazda, have set up local pro-

duction ventures over the past four years.

Mahindra, which acquired control of Alwyn Nissan last year, has decided to fit the LCVs with locally-made Peugeot engines instead of more expensive Nissan imports to make the vehicle competitive. Nissan, which has 24 per cent equity in Alwyn Nissan, has agreed to the arrangement.

The future of the Mahindra-Nissan partnership will be determined when Mahindra draws up diversification plans for Alwyn Nissan. This will be once the company is back in the black.

Sales at Mahindra rose strongly to reach Rs9.95bn (\$605.2m) in the 17 months to March, up 17 per cent on an annual basis. Gross profit was Rs58.7m, a yearly rise of 26.4 per cent. Profits after tax were Rs16.5m and the dividend is Rs3.5 against Rs2.0 for the previous 12 months.

UBS boosted by recovery in securities operations

By John Wicks in Zurich

UNION BANK of Switzerland yesterday reported "considerably better results" for the first half of 1989 than for the corresponding period of last year and expects earnings for the year to exceed the SF177.8m (\$47.2m) recorded in 1988.

The bank said that in the first six months of this year, income displayed a "gradually recovering" in the various sectors of activity. These losses and advances to clients were up 12.6 per cent to SF65.5m, due mainly to rises in the fixed-advances total and mortgage loans, while the draw-on-banks total declined by some 13 per cent to SF59.5m "as a consequence of caution exercised in view of margins."

On the liability side of the balance sheet, the bank says trends were unsatisfactory in the first half. Savings and deposit books and accounts dropped by SF2.1bn owing to interest levels, while the higher-interest time deposits jumped by SF16.5m. The due-to-banks sum contracted by SF1.1bn to SF72.1bn at the end of June.

Telephones lift Kenwood

By Robert Thomson in Tokyo

KENWOOD, the Japanese audio equipment maker, showed a 7.4 per cent increase in pre-tax profit to Y1.97bn (\$15.9m) in the first half of its year to May, following strong sales of cordless telephones and despite a flat market for audio equipment.

The company has been expanding its communications

equipment division, and sales of cordless phones and other telecommunications items rose by 44.8 per cent, while total sales rose by 5.4 per cent to Y71.2bn.

For the year, the company predicts a pre-tax profit of Y3.5bn, up 14.2 per cent on last year, with sales of Y145bn, an increase of 5.7 per cent.

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ANGLOVAAL GOLD QUARTERLYS

	Gold produced (kg)	After-tax profit (Rm)	Earnings per share (cents)	Jun 89	Mar 89
E. Tvl Costs	872	578	12.7	10.6	75.5
Hartebeestfontein	7,610	7,944	62.1	63.7	37.3
Lorraine	1,975	2,018	7.1	4.5	25.6

Earnings per share calculated after tax and capital expenditure.

JCI GOLD QUARTERLYS

	Gold produced (kg)	After-tax profit (Rm)	Earnings per share (cents)	Jun 89	Mar 89	May 89	Mar 89
Randfontein	6,683	6,279	43.9	31.9	164.3	336.3	
W. Areas	2,981	3,249	(6.2)	(1.4)	47.5	(28.9)	

Earnings per share calculated after tax and capital expenditure. Parentheses = negative.

JCI mines' results mixed as costs rise and gold price falls

By Jim Jones

RESULTS FROM Randfontein and Western Areas, the two operating gold mines managed by the JCI group, highlighted difficulties faced by South Africa's gold mines during the current period of rising costs and poor gold prices.

Western Areas reduced its mill throughput and recovery grade as a result of substantial changes in its mining plan, so sharply increased its operating

loss.

Mr Ken Maxwell, the chairman, said in Johannesburg yesterday that the mine's losses and its resultant large debt were "very worrying indeed," but he sees no prospect of the mine closing and expects profits by the end of this financial year.

At present the mine is engaged in an extensive move towards mechanised mining, but is having to increase its production from conventional mining before it prepares the ground for full-scale mechanisation.

The average gold price received by Western Areas was higher than the industry's average as a result of options taken out last year. These options have now expired and no new ones have

been entered into.

The mine's financial plan for the present fiscal year has been based on an average gold price of R35,000 (\$12.85) per kg against the June quarter's R33,783. However, Mr Maxwell says that JCI's mining costs are likely to rise in line with inflation, at about 15 per cent a year.

In contrast, Randfontein increased its milling rate and recovery grade, helped by better grades of ore drawn from the new Doornkop section. The mine is gradually increasing the proportion of ore drawn from underground and reducing the fraction taken from low-grade surface dumps. Mr Maxwell expects the mine's overall grade to improve slightly in the next two quarters.

ANGLO WILL CONTINUE BUILDING OVERSEAS INTERESTS THROUGH MINORCO

ANGLO AMERICAN Corporation intends to continue building up its overseas interests through Minorco, its foreign investment arm, but will remain rooted in South Africa, Reuter reports from Johannesburg.

Mr Gavin Kelly, the chairman, said in his annual address to shareholders that Minorco's UK sale of its 25 per cent

shareholding in Consolidated Gold Fields to Hanson this month gave Minorco an opportunity to take advantage of new investment opportunities from a powerful

interest within its own relatively limited foreign resources... will continue to build directly and in support of Minorco," Mr Kelly said.

"At the same time we are first and foremost a grassroots South African entity, and have no desire to change that."

All companies mentioned are incorporated in the Republic of South Africa. All financial figures for the quarter and progressive figures for the current year to date are unaudited.

Rate of exchange on 20 June 1989: R1.00 = £0.23, £1.00 = R4.36.

Corporate and financial figures are the latest available. No allowance has been made for adjustments necessary in the valuation of the corresponding oil reserves.

Shareholders receiving copies of these reports regularly each quarter, should write to The Secretary, Anglo-Transvaal Trustees Limited, 285 Regent Street, London W1R 8ST.

W. Areas

Randfontein

Eastern Transvaal

Consolidated Mines, Ltd

Hartebeestfontein
Gold Mining Co Ltd

Reg. No. 053352000

Issued capital: 112 000 000 shares of 10 cents each

	Quarter ended 30 June 1989	Quarter ended 31 Mar 1989	Financial year ended 30 June 1989
Operating results			
Ore milled	788 000	779 000	3 158 000
Gold recovered	7 038	7 322	28 216
Yield	9.0	9.4	9.3
Revenue	501 88	507 25	310 656
Costs	48 22	49 69	50 43
Profit	453 66	497 56	261 218
Rifimed	157 18	146 35	156 18
Revenue	53 712	52 650	53 753
Costs	51 12	53 36	51 12
Profit	18 592	17 119	16 914
Rifimed	15 318	15 571	15 318
Revenue	52 292	52 292	52 292
Costs	50 000	50 000	49 945
Profit	10 292	12 292	12 292
Rifimed	129 461	126 348	146 145
Revenue	107 611	114 005	493 198

	Quarter ended 30 June 1989	Quarter ended 31 Mar 1989	Financial year ended 30 June 1989
Operating results			
Ore milled	385 000	388 000	1 550 000
Gold recovered	672	622	2 417
Yield	9.9	10.0	9.9
Revenue	50 42	49 69	50 43
Costs	48 22	49 69	50 43
Profit	2 20	1 03	15 11
Rifimed	17 20	16 33	15 67
Revenue	52 294	51 076	52 295
Costs	50 000	50 000	49 945
Profit	2 294	1 076	2 250
Rifimed	20 949	20 855	22 223
Revenue	18 504	18 322	18 164
Costs	16 821	16 531	16 284
Profit	1 683	1 291	53 982

A few significant capital expenditures are foreseen; consideration is being given to the distribution of a portion of the Company's retained earnings as at 30 June 1989.

Operations

Underground mining operations at current levels will cease during the September 1989 quarter. Treatment of low-grade surface dump material, possibly supplemented by limited amounts of ore from underground sources, will commence thereafter and will continue for as long as such operations remain profitable.

The operating profit for the quarter includes a further provision of R1 378 000 towards the anticipated costs which will be incurred to comply with statutory and other obligations associated with the eventual closure of the mine. The total amount provided to 30 June 1989 is R1 386 000 (31 March 1989: R1 028 000).

Some significant capital expenditures are foreseen; consideration is being given to the distribution of a portion of the Company's retained earnings as at 30 June 1989.

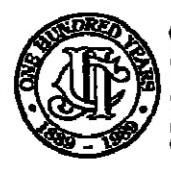
Capital expenditure

There were no outstanding commitments at 30 June 1989 (31 March 1989: R1 222 000).

For and on behalf of the board

J.D. Crowe, Directors

B.E. Herzer, R.M.S. (Chairman), R.L. Beale, H.H. Liddell, P.J. P



**Johannesburg
Consolidated Investment
Company, Limited**
Proprietary and Ordinary
Shares of £1 each
Listed on the Stock Exchange
and in the Register of Stock Agents

GROUP GOLD MINING COMPANIES
Summary of reports for the quarter ended 30 June 1989

Randfontein Estates

The Randfontein Estates Gold Mining Company, Johannesburg, Limited. Registered office Johannesburg.

	Quarter ended	30.06.89	31.03.89
Ore milled: tons (000)	2,216	2,165	
Yield: grams per ton	3.00	2.90	
Working cost - per ton milled	R177.59	R177.22	
	R2000	R2000	
Profit from gold	42,926	29,659	
Net profit after tax	43,894	31,945	
Capital expenditure	33,849	11,391	

Western Areas

Western Areas Gold Mining Company Limited. Registered number 000226002

	Quarter ended	30.06.89	31.03.89
Ore milled: tons (000)	965	1,007	
Yield: grams per ton	3.09	3.23	
Working cost - per ton milled	R115.98	R111.83	
	R2000	R2000	
Loss from gold	11,925	9,901	
Capital expenditure	12,903	10,622	

H.J. Joel

H.J. Joel Gold Mining Company Limited. Registered number 000226003

	Quarter ended	30.06.89	31.03.89
Ore milled: tons (000)	98	79	
Yield: grams per ton	3.23	3.22	
Working cost - per ton milled	R120.04	R119.20	
	R2000	R2000	
Refined metal sampled	414	318	
Average ref width cm	45	44	
Contractive grams per ton	1,057	943	

Randfontein's working cost per ton has been kept constant while mill throughput has increased and average grades have improved. Western Areas experienced increased unit costs and decreased tonnage. Results are expected to improve as higher-grade reserves are mined on the VCR.

Joel's metallurgical plant capacity is now 80,000 tons per month and the build-up of stoping tonnage is proceeding as planned.

Elliott Gold Mining Company Limited. Shareholders are advised to study the operating results of Western Areas Gold Mining Company Limited.

Quarterly reports have been mailed to the shareholders of each company. Copies of the reports may be obtained from: Barbour Bros Limited, 59 Belgrave, London EC2M 3AE.

Johannesburg
16 July 1989

This announcement appears as a matter of record.



Topdanmark A/S
Euro-equity
Issue of 600,000 Shares of DKK 100 each
Issue price DKK 1,025 per Share

Privatbanken A/S

Deutsche Bank
Aktiengesellschaft Kleinwort Benson Limited Swiss Volksbank

Enskilda Securities
Stockholm Enskilda Limited

Andelsbanken Den Danske Bank Handelsbanken Sparekassen SDS

BSI-Banca della Svizzera Italiana

Banca del Gottardo
Handelsbank NatWest Bank Leu AG
Swiss Cantobank (International)



Creditanstalt-Bankverein

U.S. \$125,000,000

Subordinated Floating Rate Notes 1994

For the six months 17th July, 1989 to 17th January, 1990 the Notes will carry an interest rate of 8½% per annum and coupon amount of U.S. \$226.81 payable on 17th January, 1990.

Bankers Trust
Company, London Agent Bank

**TSB Hill Samuel Bank
Holding Company plc
(Formerly Hill Samuel
Group plc)**

US\$100,000,000
Floating Rate Notes due 2016

In accordance with the provisions of the Notes, notice is hereby given that for the six months 17th July, 1989 to 17th January, 1990 the Notes will carry a Rate of Interest of 9½% per annum and that the interest payable on the Notes will be determined by the Interest Date, 17th January, 1990 plus amount to US\$475.97 per US\$10,000 Note. Note US\$11,895.31 per US\$250,000 Note.

Agent Bank
Morgan Guaranty Trust
Company of New York
London

**Den Danske Bank
AF/1871 AS**

£4,000,000,000

Floating Rate Notes
Due 1994

Notice is hereby given that the Rate of Interest for the Interest Period from 19th July, 1989 to 19th January, 1990 is 5.07% per annum.

Interest payable on 19th January, 1990 will amount to £255.58 per £10,000,000 principal amount of the Notes.

Agent Bank
The Long-Term Credit Bank
of Japan, Limited
Tokyo

**CREDIT D'EQUIPEMENT
DES PETITES ET MOYENNES ENTREPRISES**

up to U.S. \$200,000,000

**Guaranteed Floating Rate Notes
Due 1996**

For the six months 17th July, 1989 to 17th January, 1990 the Notes will carry an interest rate of 8¾% per annum and Coupon Amount of U.S. \$18.47 per U.S.\$10,000 Note, payable on 17th January, 1990.

Bankers Trust
Company, London Agent Bank

INTERNATIONAL COMPANIES AND FINANCE

Increased trading volume boosts US securities firms

By Janet Bush in New York

SEVERAL Wall Street securities firms reported improved second quarter earnings yesterday, reflecting higher trading volume in stock and bond markets, and booming business in the merchant banking business for some.

Merrill Lynch, with a substantial retail business as well as a highly developed merchant banking group, reported net earnings in the second quarter of \$70.2m, or 62 cents a share, a 31 per cent gain from a year earlier when net earnings totalled \$53.5m or 47 cents.

This is an impressive recovery from the doldrums of the three months to March 31 when earnings per share halved to 31 cents, against the first quarter of 1988.

Mr William Schreyer, chairman, and Mr Daniel Tully, president, said the latest results underscored the value of the company's "one-firm,

two-sector business." They said there were solid revenue increases in virtually all areas of its consumer business including commissions, insurance and asset management.

Merrill Lynch Capital Markets continued to perform strongly in principal transactions and in merchant banking and retained its number one ranking in the global and domestic underwriting of debt and equity securities.

Commission revenues advanced 18 per cent to \$422m, while investment banking revenues fell 8 per cent.

Marion Stanley announced earnings of \$112.1m, or \$2.83 in the second quarter, compared with \$105.3m or \$2.62 a year earlier. News of a 2.75 cents a share quarterly dividend, an increase of 222 per cent from previous pay-outs, helped the shares to a gain of 14% at mid-session to \$70.4m.

Citibank said that the earn-

ings growth reflected continuing strength in its consumer banking business around the world and local currency business in emerging economies. Net income from this sector jumped to \$208m in the quarter from \$160m.

Results were weak in corporate and investment banking in the main industrial economies because of lower venture capital gains and trading results.

New commercial loans increased by \$249m during the latest quarter to \$2.46bn, with US commercial real estate loans contributing \$1.15bn, up more than 20 per cent from a year earlier.

Wells Fargo, the ninth largest US banking group, reported an 18 per cent increase in second quarter net profits to \$147.4m, or \$2.83 a share, from \$124.4m, or \$2.24, reflecting strong loan demand in the US. Net interest income rose to \$551.5m from \$482.1m while non-interest income jumped by

25 per cent to \$211.7m.

The group had no medium or long term loans outstanding to developing countries at the end of the quarter. Short term loans to them totalled \$153m, or 0.3 per cent of total assets.

Restructured and non-accruing real estate loans, all in the US, totalled \$1.2bn, or 3 per cent of total assets.

Continental Bank of Chicago reported a 6 per cent rise in second quarter net income to \$64m, or \$1.01 a share, from \$60m, or 95 cents, a year earlier. Revenues rose to \$226m at period end.

Total assets were \$31.8bn at June 30, down from \$32.4bn a year earlier. Return on assets edged ahead to 0.83 per cent from 0.79 per cent. Corporate finance revenues totalled \$151m in the latest quarter, up 12 per cent from \$135m a year earlier.

The increase was due mainly to higher fees from loan syndication and distribution activities.

Net income for the nine-month period was \$233m or \$2.28 per share against \$232m or \$2.24 per share, for the same period last year. Sales rose 3.4% compared with the last year's corresponding period to \$3.9bn.

"As we enter the fourth quarter we see continued strong demand for the Macintosh IIx and SE/30 around the world. The good market acceptance for these two products makes us confident that fiscal 1989's revenue will exceed \$5bn," said Mr Sculley.

Until five years ago, Marion was a prosperous but relatively modest outfit, with a stock market value of only \$300m and sales of less than \$200m a year.

Then, through a combination of good luck and judgment, the company stumbled in the early 1980s on two drugs developed in Japan whose market potential nobody had begun to suspect. These drugs were Cardizem, a calcium channel blocker used for the treatment of heart disease and high blood pressure, and Cardilate, an anti-ulcer drug which turned out to be an attractive alternative for patients who reacted badly to other ulcer treatments such as Zantac and Tagamet.

Although these drugs were not new, the anti-ulcer and cardiovascular treatments which they provided were just beginning to find acceptance among physicians, partly as a result of Marion's effective selling. Both markets suddenly took off at a

Demand for Macintosh computers lifts Apple

By Louise Kehoe
in San Francisco

APPLE COMPUTER is confident that sales of its personal computer products will top \$5bn in fiscal 1989 as demand for its latest Macintosh models continues to rise.

Third quarter results reported yesterday, show a 26 per cent rise in revenues to \$1.2bn, up from \$993m. Reduced profit margins brought net income to \$36.1m or 74 cents per share for the quarter, compared with \$31.3m or 71 cents in the same period last year.

The stock market reaction to Apple's slowing earnings growth pushed the company's share price down by \$1.50 to \$39.4 in heavy trading.

"Throughout fiscal 1989 our product costs have been adversely affected by higher component costs, most notably dynamic random access memory [DRAM] chips," said Mr John Sculley, Apple chairman.

Earlier in the year Apple revealed that it had a surplus of DRAMs purchased at peak prices during last year's chip shortage.

Analysts said that Apple's margins were further reduced by a shortage of 80 megabyte hard disk drives, used primarily with its high performance Macintosh II models. Customers are purchasing systems without the drives rather than wait for Apple's suppliers to get them, analysts said.

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INTERNATIONAL CAPITAL MARKETS

Wider trade deficit drags Treasuries lower

By Janet Bush in New York and Katharine Campbell in London

NEWS OF a wider than expected US trade deficit in May dragged US Treasury bond prices down yesterday but losses were limited by a relatively resilient performance by the dollar and a more pressing interest in

The bond market is more concerned with today's consumer price release and tomorrow's Humphrey Hawkins testimony to Congress on monetary policy by Mr Alan Greenspan, chairman of the US Federal Reserve.

Interest rates remain the key to sentiment in the bond market, which has already fallen to yield levels which discount a further easing move by the Fed. Fed funds again traded solidly at 9% per cent yesterday.

The notably limited reaction of the bond market to yesterday's trade figures reflected a relatively benign interpretation. The rise in imports to record levels in May was attributed, to a large extent, to oil and capital goods imports and to distortions in trade flows due to dock strikes overseas.

The 0.8 per cent decline in exports was seen as further evidence of weakness in the manufacturing sector, which might yet give the Fed room to ease conditions.

BENCHMARK GOVERNMENT BONDS							
	Coupons	Red Date	Price	Change	Yield	Week ago	Month ago
UK GILTS	13.500	9/22	105.24	+1.02	10.91	11.15	11.53
	9.750	1/98	97.04	-2.02	10.26	10.37	10.72
	9.000	10/08	98.29	-0.52	9.55	9.41	9.70
US TREASURY *	8.125	5/98	108.23	-0.32	8.12	7.95	8.35
	8.875	2/19	107.31	-1.02	8.16	8.01	8.32
JAPAN No 111	4.600	6/98	96.0494	+0.178	5.25	5.21	5.49
No 2	5.700	3/07	104.2697	+0.257	5.03	5.05	5.17
GERMANY	7.000	2/98	102.0000	-0.100	6.70	6.63	6.74
FRANCE BTAN CAT	8.000	1/94	98.847	-0.174	8.67	8.65	8.85
	8.125	5/99	98.900	-0.140	8.60	8.57	8.65
CANADA *	10.250	12/98	105.150	-0.675	9.41	9.25	9.44
NETHERLANDS	7.000	3/99	99.3200	-0.380	7.09	7.05	7.18
AUSTRALIA	12.000	7/99	92.0728	-0.281	13.47	13.46	13.65

Yield: Local market standard
Yield: Local market standard
Source: US, UK in 32nds, others in decimal
Technical Data: ATLAS Price Sources

IN THE Australian bond market seemed inured to bad news on the current account front, so yesterday's A\$1.63bn deficit in June - towards the upper end of economists' forecasts - did not provoke a significant reaction.

"Exit Australia," a dismal report from Citicorp Scrimgeour Vickers published today

advising investors to sell all

The September 10-year

future contract, which opened at 95.58, was only five basis points weaker by the close, although traders said prices had been quite volatile.

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BNP C\$100m deal heads weak list of new issues

By Andrew Freeman

TRAIN STRIKES and trade figures dominated thin activity on the Eurobond markets yesterday. In London many issuers left early to try to beat the extended rush hour, while European interest was mild after the US trade data and

against Canadian government bonds of around 57 basis points. The BFCI paper was then trading at a spread of 45 basis points, considerably tighter than its launch spread of 63 basis points.

One confirmed syndicate manager said: "Given the limited demand for even sovereign paper in this sector, the spread for a much more generous, perhaps by as much as 1% point."

Doubts about the terms saw the paper slip almost immediately outside 1% per cent fees, to trade at less 1.55 bid.

The lead manager was forced to buy some bonds back from the market, but said the issue had made a steady start in tricky market conditions. It is understood the proceeds were swapped into floating-rate US dollars, but the lead manager would not comment.

Credit Suisse First Boston brought a £100m issue for Mercion Overseas, a subsidiary of the Italian white goods producer. The 10-year bonds offer a 9 per cent coupon and are convertible into both ordinary and savings shares of the parent company.

STERLING Land Securities(d)♦ 175 9.5 100 2004 21/2/1 J. Henry Schroder Wag

US DOLLARS Kajima Corp.(e)♦ 400 3 100 1993 21/2/1 Daiwa Europe Nomura Int.

SWISS FRANCS Daili Finance Co.(f)♦ 200 0 100 1994 15/2 Citicorp Investment Bank

*Private placement. ♦With equity warrants. ♪Convertible. ♫Final terms. a) Non-callable. b) Call from 1990 at 105 declining by 1% p.a. c) Launched in two tranches one of 12.5m paying 5.5%, and one of 300m, paying 7%. d) Redemptions at 104.5% of par value. e) Coupon indicated 9.4%. f) Non-callable. g) Coupon 9.5%. Exchange option 5-10 years and non-convertible 10% bond due 2004. h) Coupon cut by 1% from indication. i) Coupon cut by 2% from indication. j) Coupon cut to put 3.855% (indication 4.22%).

CSFB had conducted extensive pre-placement on the issue, which followed a roadshow by the company two weeks ago. The bonds were offered by CSFB at their par issue price yesterday, while away from the lead manager the paper was quoted at 99 bid.

Hambros Bank was the lead manager of a NZ\$30m five-year

deal for the Commonwealth Bank of Australia which came with a 13% per cent coupon and was priced at 102.

There was some demand for the paper which was bid on fees at less 2 by Hambros. Elsewhere the bonds were bid at less 1.92. The proceeds were swapped into floating-rate Australian dollars.

In Switzerland yesterday Warburg Soditic set an initial SF75m tranche as secondary offering began in its 7% per cent five-year deal for Control Securities Finance, part of the UK property and leisure group.

The bonds closed at 99% bid, against their par issue price. In the grey market the paper was around less 1% bid.

The bank, which has a loan portfolio in excess of \$155m, provides funds for new industries.

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الإمداد

UK COMPANY NEWS

The BAT bid highlights the fragility of bank loyalty

Banque Paribas may back the Hoylake consortium

By David Lascellis, Banking Editor

THREE POSSIBILITIES that Banque Paribas will join the bidding for the Hoylake consortium, which is bidding £13m for BAT Industries points to the fragility of loyalty in the banking world.

Of all French banks, Paribas was one of those with which BAT had the closest relations. Paribas obtained a listing for BAT on the Paris stock exchange in 1985, and has sponsored most of BAT's annual presentations to French investors since then.

"We were very disappointed by their announcement," said Mr Richard Desmond, BAT's corporate treasurer yesterday.

For its part, Paribas had to take into account the fact that it also has close relations with Sir James Goldsmith, who is both a client and co-investor in joint projects. Paribas said last night that it would continue to the time before to work with BATs, particularly in the area of supplying stock market information. But the future of the relationship would have to be decided once the bid situation became clearer.

A similar shift to the enemy camp was made by the other major commercial bank behind the bidding consortium. Bankers Trust, last year, both Banque Paribas and Paribas were among the participants in a \$2.2m revolving credit facility which was raised for BAT by a group of 22 international banks to buy Farmers Group, the US insurer. Bankers Trust also underwrote several other BAT facilities, was the paying agent for the Farmers M&A, and helped with the recapitalising of Australia's Australian associate.

To some extent, all these conflicting loyalties are now available for a company of BAT's size and wide geographical spread which has relationships with dozens of banks in many countries. For example, when BAT recently did a short term financing deal, there were no fewer than 72 banks in it.

Mr Desmond said that BAT had not been putting any overt pressure on banks to stay out of the enemy camp. "We're not going out and bellowing at people. That's not the way our relationships work," he said.

But clearly banks thinking of joining Hoylake will run the risk of losing BAT business in a highly competitive market.

"We'd be most distressed, and it would have an effect on our future relationship," he said.

See Lex

Argyll chief 'assured' by DTI over role in Distillers takeover

By David Waller

MR ALASTAIR Grant, chairman of Argyll Group, visited the Department of Trade and Industry yesterday to discuss recent press speculation about Argyll's involvement in the DTI's investigation into Guinness over its takeover of Distillers in 1986.

Mr Grant had a meeting with a high ranking official and was given what he interpreted as assurances that the inspectors had completed their enquiry.

Argyll wishes to make it clear that the investigation is only into the affairs and membership of Guinness and not the affairs of Argyll," Argyll said in a statement sent by the DTI before being released to the Stock Exchange.

Last Friday, the Takeover Panel ordered Guinness to pay £25m compensation to former Distillers shareholders. Of this, £7m is to go to Argyll and £25m to its advisors which bought Distillers shares at the time of the takeover.

He was told that the position

not be considered until after the outcome of criminal proceedings against seven men in connection with the takeover.

Press speculation that the DTI was probing Argyll's share dealings during the takeover appeared over the weekend and on Monday.

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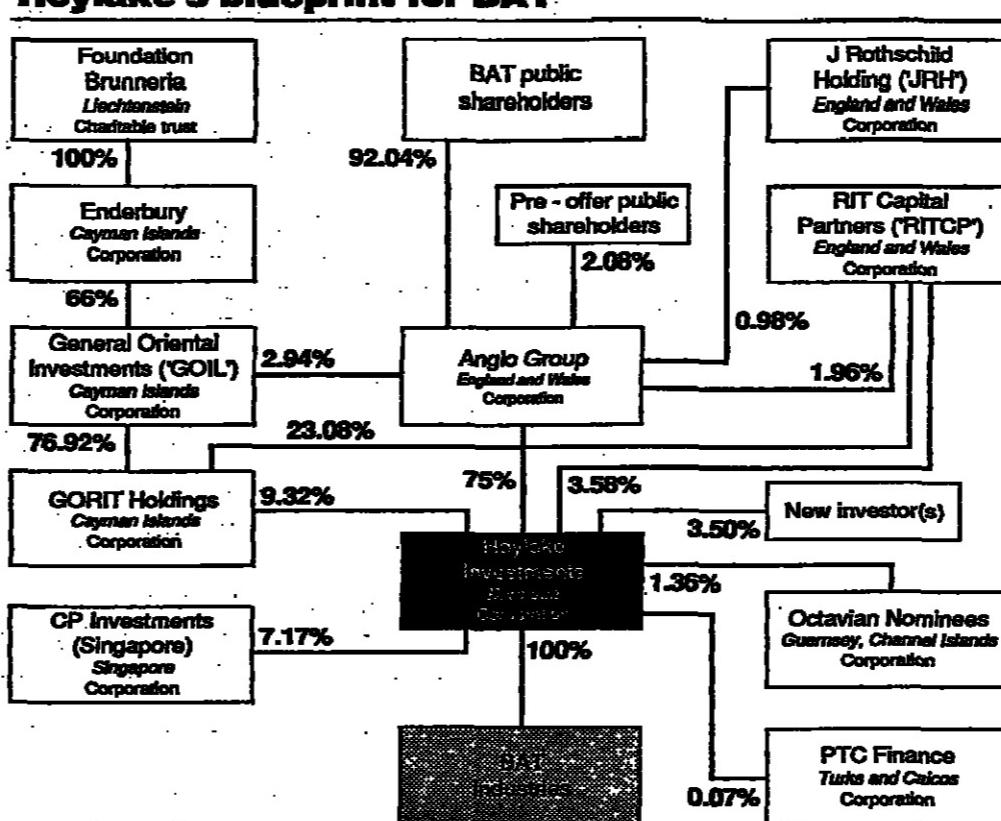
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Hoylake's blueprint for BAT



Copies of this chart appear in the documents filed with US insurance regulators by Hoylake, the investment vehicle for Sir James Goldsmith's bid for BAT. It sets out Sir James's plans for the way the ownership structure of BAT will look if Hoylake's £13m bid is successful.

The entities on the upper left - Brunneria, Enderbury, GOIL and GORIT - are Goldsmith family companies. According to the filings: "as a result of James M Goldsmith's position as chairman of GOIL and certain authority he has with respect to Brunneria, Brunneria and Mr Goldsmith may be deemed to be parents of GOIL."

Securiguard up 67% to £2.45m

Pre-tax profits of £2.45m for the 28 weeks to May 21 were announced by Securiguard, the security systems and industrial cleaning group.

The outcome represented a 67 per cent increase on the previous year's £1.47m.

Turnover in the first half was 53 per cent higher at a peak £46.85m (£24.3m). After tax of £38.00m (£25.00m), earnings per 50p share were 10 per cent higher at 8.7p.

There were no exceptional profits this time (£11.000). The interim dividend is increased from 2.2p to 2.8p. Last year's total was 6.5p.

At bottom left, CP Investments (Singapore) is a subsidiary of Mr Kerry Packer's Consolidated Press Holdings. At top right, J Rothschild Holdings and RIT Capital Partners are part of Mr Jacob Rothschild's stable of companies. RIT is the investment trust that was spun off by J Rothschild Holdings in 1988.

At bottom right is a box marked "New Investors". At present, GOIL owns the 3.5 per cent of Hoylake's shares referred to. GOIL is currently seeking additional investors to purchase such interest, the filings say. It was revealed last night that these additional investors will include the UK's GEC and Italy's Agnelli family.

Hampson shares rise as profits climb to £6.2m

By Edward Sussman

HAMPSON INDUSTRIES, the acquisitive West-Midlands based holding company with interests in precision engineering, industrial cleaning, bulk handling and printing equipment, boosted pre-tax profits 45 per cent in the year to March 31, from turnover ahead 33 per cent.

Profits came through at £2.2m (£4.3m) on turnover of £57.2m (£34.3m). A one-for-five scrip issue was proposed. Hampson shares gained 8p to 52p yesterday.

Mr John Wardle, chairman, made an optimistic forecast in tandem with the results.

"There are some signs of nervousness in the media and the markets with regard to short-term prospects for the manufacturing industry," he said. "I do not feel nervous about the short-term prospects for Hampson Industries."

Mr Wardle said the scrip issue was prevented last year

by technical matters. The company brought out a £4.94m rights issue at the time instead. The present rate of dividend will at least be maintained," he said.

No divisional breakdown was released, but the company said the secondary aluminium market had shown especially good results.

The results also included the first full year profits from the Kenmar Organisation, a printing machinery group, and from Switchfield, names and supplier of PVC and aluminium doors and windows.

Mr Wardle said all principal activities, except one, had shown progress. The one activity was not identified.

Earnings per share were up 21 per cent at 8.56p (£7.07p) on a diluted basis. A final dividend of 1.75p brings the year's total to 2.5p (£1.65p), up 44 per cent.

Ansbacher gets £9.6m for insurance interests

By Patrick Cockburn

HENRY ANSBACHER Holdings, the financial services group, has sold its Ansbacher Insurance Holdings subsidiary to Leslie & Godwin, the Lloyd's broker, for £9.6m.

Henry Ansbacher said it was ending its interest in insurance because it believed conditions in that market were likely to remain difficult in future. In recent years its insurance activities had not provided an adequate return on capital.

Ansbacher Insurance is an international broking and marine underwriting group. It owns three Lloyd's brokers which provide marine insurance and non-marine services.

In the US it owns Underwriters' Marine Services, a marine

underwriting agency based in New Orleans.

The sale does not include the 75 per cent interest in Adams & Porter, a US retail insurance broking group based in New York and California. This is to be sold at a later date.

Excluding Adams & Porter, Ansbacher Insurance incurred a loss before tax of £265,000 in 1988.

Henry Ansbacher intends to use the proceeds of the sale, on which it expects to pay no UK tax, for other investment activities.

First blood to Anglo United in battle for institutional favour

By Ray Bashford

ANGLO UNITED has won the first round in the fight to secure the support of the institutional shareholders in Coalite who are making their final assessments of Anglo's £475m takeover offer.

Mr Eric Varley, Coalite chairman, said that the Prudential's move was a sign that it did not believe that Anglo United would succeed.

"If the (Pru) thought that the offer was going to go through they would have waited to receive the higher offer price," the chairman said.

One hundred institutions control 82 per cent of Coalite's capital with the 10 largest groups in charge of a 35 per cent stake.

The Prudential, one of the 10 largest shareholders, was revealed yesterday as the seller of half of its 10 per cent holding on Monday to Anglo United. The 2.8 per cent block was sold at 475p per share compared with the 470p per share cash element of the bid and boosted Anglo United's stake to 8.4 per cent.

Mr Varley said the Prudential was continuing to receive "positive support from a considerable number of institutional shareholders."

Both sides are keenly awaiting the decision of the biggest shareholder, Morgan Grenfell Asset Management fund, which controls 7.8 per cent of the capital.

Anglo United picked up slightly over 2 per cent of the fund's previously larger holding on the day of the takeover offer was announced in late May.

Compensation possible for Abbey shareholders

By Clare Pearson

SHAREHOLDERS in Abbey National who can demonstrate they have lost money as a result of a computer bungle by the registrars will be able to claim compensation for borrowing costs incurred after flotation day, July 12, Lloyds Bank Registrars said yesterday.

But these shareholders, along with others of the 120,000 members who have applied for extra shares, face a lengthy process of correspondence with Lloyds before they will receive either compensation or their share certificates.

The addresses on these letters were garbled due to the inability of the Lloyds computer to cope with more than five lines.

Lloyds is today writing to all those concerned to check the certificates did not reach them, despite the garble, and they will have to write back confirming this before the certificates are sent out again. Those seeking compensation will also have to provide proof.

Lloyds said yesterday it could not say quite how its compensation scheme would work. But it would cover interest payments on overdrafts and associated transmission equipment, for £275,000.

DIVIDENDS ANNOUNCED

	Current payment	Date of payment	Corres-pending dividend for year	Total last year
Brassey	fin 1.0725	Oct 26	0.7175	1.62265 1.0175
Clayton 5	int 0.51	Nov 19	1.8	3.9 3
Colgate & Player 5	int 2.15	Sept 19	2.3	3.37 1
Electron House	int 2.2	Oct 3	2.5	5.6 4.5
Euroharm	int 1.75	Oct 3	1.47	- 5.33*
Hampson Inds	int 1.75	Oct 2	1.25	2.3 1.65
Harris (Philip)	int 3.5	Sept 4	3.5	5.5 5.5
Leafe Wise	int 1.5	-	1.25	- 3
Microgen	int 2.2	Aug 25	2	- 5
Rush & Tompson	int 11.2	Oct 9	9.3	15.2 12.5
Securiguard	int 2.8	-	2.2	5.5

Dividends shown per share net except where otherwise stated. *Equivalent after allowing for scrip issue. **On capital increased by rights and/or acquisition issues. \$USM stock. \$USM quoted stock. #Third market.

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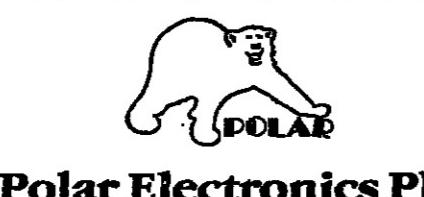
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Samvirke Forsikring
Sparebanken Nordland
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Polar Electronics Plc

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Samuel Montagu & Co. Limited
of 1,900,000 ordinary shares of 10p each
at 105p per share

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Polar Electronics Plc is engaged in the distribution of a broad range of electronic components to a wide customer base.

Samuel Montagu & Co. Limited has arranged for the ordinary shares made available in the Placing to be placed by Laurence Prust & Co. Ltd and by Smith Keen Cutler with their clients.

Full particulars of the Company are available through the Extel Unlisted Securities Market Service and copies may be obtained during normal business hours on any weekday (Saturdays and bank holidays excepted) up to and including 2 August 1989 from:

Samuel Montagu & Co. Limited
10 Lower Thames Street
London EC3R 6AE

Laurence Prust & Co. Ltd
27 Finsbury Square
London EC2A 1LP

Smith Keen Cutler
Exchange Buildings
Stephenson Place
Birmingham B2 4NN

and during normal business hours on 20 and 21 July 1989 from the Company Announcements Office, The Stock Exchange, 46-50 Finsbury Square, London EC2A 1DD. 19 July 1989

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The Interests Corporation are
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NOTICE IS HEREBY GIVEN that, pursuant to the provisions of Section 5 of the Fiscal and Paying Agency Agreement dated August 7, 1988 between the Interests Corporation and the Chase Manhattan Bank (National Association), as Fiscal and Paying Agent, and paragraph 8(a) of the General Terms and Conditions of the Notes, the Notes will be redeemable at the option of the Interests Corporation on August 7, 1989 (the "Redemption Date") at the price of 100% of their principal amount (the "Redemption Price"). On and after the Redemption Date, the holders of the Notes shall cease to accrue interest from and after the Redemption Date. On and after the Redemption Date, the right of the holders of the Notes shall be to receive the Redemption Price.

Payment of the principal amount and the surrender of the Notes, together (in the case of bearer Notes) with all appropriate coupons maturing subsequent to the Redemption Date, at any place where the Notes are held, will entitle the holder to receive the Redemption Price.

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5 Rue Pétain
L-2335, Luxembourg Grand

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8024 Zürich, Switzerland

Coupons which shall have matured on or prior to the Redemption Date should be detached, presented and surrendered to the Fiscal and Paying Agent at the time of payment.

Payment on any Note made within the United States, including by transfer to a United States dollar account maintained by the payee with a bank in the City of New York, may be subject to reporting to the United States Internal Revenue Service. The payee will be required to furnish the payee's name and address and to accrue interest if the payee fails to provide the paying Agent with an executed IRS Form W-9 in the case of a non-U.S. person or an executed IRS Form W-8 in the case of a U.S. person. No such backup withholding will be imposed on the payee if the payee provides the payee's name and address and the payee's tax identification number in New York, New York, if payment is made outside the United States. Information reporting to the IRS will only be required when such payment is made outside the United States. If made to U.S. persons in certain circumstances, payment will be subject to reporting to the IRS. If the payee is a foreign corporation, please provide any appropriate certificate when presenting the Notes for payment.

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14.0625% per annum

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Interest Amount per
£5,000 Note due
18.10.89: £1,772.26

Interest Amount per
£50,000 Note due
18.10.89: £17,722.6

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UK COMPANY NEWS

The volatility of high technology business

Paul Abrahams on the problems facing companies at the forefront of their field

THE SALE of Crosfield Electronics by De La Rue to Du Pont and Fuji reflects both the potential and dangers of fast growing high-technology industries.

The potential in Crosfield is considerable. It is one of the leading companies in pre-press technology and in particular electronic colour page composition systems. These allow high-resolution text and images to be electronically altered before they are printed.

The market for such systems is expanding rapidly according to Mr Clifford Schwitzer, business director for Dupont's electronic imaging systems division. In the pre-press arena, the success of Wace and Parkway, the rapidly growing UK pre-press groups, has been based upon this technology. Moreover, in the medium term, such technology could also be used for applications outside the graphics and printing industries which have been Crosfield's main markets. These include medical and satellite imaging, and defence, says Mr Schwitzer.

De La Rue's pre-press division should match the ambitions of both Dupont and Fuji. These companies have recognised that the film they manufacture will eventually be replaced by digital systems similar to Crosfield's.

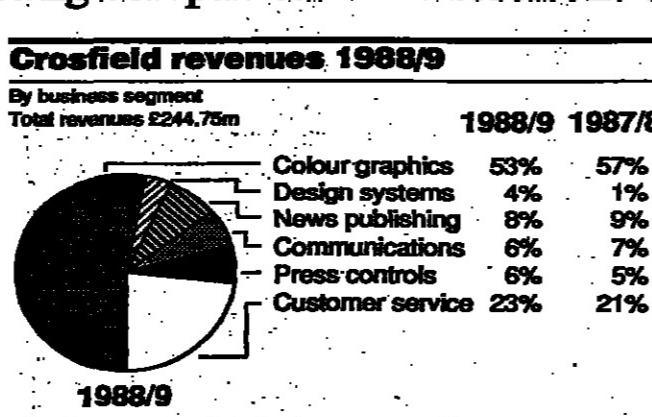
Last May, after the acquisition

of Howson-Alphraphy, the manufacturer of lithographic printing plates owned by Vickers, Mr Keween Blanchard, Du Pont's vice-chairman said that imaging systems was one of the businesses the company had targeted for growth. Until the acquisition of Crosfield, the company's expertise was limited to black and white systems and the results of a relatively new joint research venture in colour imaging will follow.

Although the potential for growth of Crosfield was apparent to De La Rue, so too were the risks. Profits in the division fell from £21m in 1987 to £5.2m last year. This included a loss of £1m in the second half of the financial year, which contributed to a 57 per cent fall in the group's profits.

"The problem is that there is always an inherent degree of volatility in a hi-tech company," explains Mr Jim Salmon, Crosfield's managing director and deputy chief executive at De La Rue. "The trouble is trying to project smooth growth. In the second half of last year we walked off the edge of a cliff."

The difficulties faced by Crosfield were typical of those faced by most technology-driven companies. Both Crosfield and Schiefer, its main competitor in the electronic page composition sector, have expe-



rienced down-turns in business when trying to introduce new systems.

Last year Crosfield was forced to postpone the introduction of a new generation of electronic page composition systems based on a 32-bit platform after Schiefer had launched a similar system more than 18 months ago.

However, the division subsequently had difficulties with the design of the application specific integrated circuits (Asics) necessary for the new machines, as well as problems in the "systems" software. The result was that instead of shipping the product in January, the first generation equipment was not ready until the end of May. The second generation

machines, which should be free of software problems, will only be ready by October.

The result of this delay was that the division was in no position to handle a dramatic decline in the sales.

The effect of this fall on Crosfield was considerable. Although the company had been emphasising last year that it had diversified, the group so that it could absorb such down-turns, the colour graphic sector, made up of electronic page composition systems and scanners, still generated 53 per cent of the division's turnover in 1988.

In addition, the division was faced with falling margins in the scanner market where the Japanese-based company, Dainippon, was actively price-cutting. Simultaneously, the news-publishing sector, which represented about 8 per cent of the division's turnover, was adversely affected by the US election and down-turn in advertising revenue.

The sale of Crosfield was, in the long-term, not unlikely explains Mr Salmon. Although the new generation of equipment now being launched should improve margins because it is cheaper to manufacture, it would eventually have to come under pressure from other large companies.

He points out that companies such as Kodak and Agfa, as well as Dupont and Fuji, were already moving into the market. It would, he says, have been very difficult for De La Rue to have taken on these giants because it would never have been able to afford the marketing effort necessary to break out of the graphics field.

This echoes reasons given by other British companies in explaining the sale of world-leading divisions. When Vickers, the UK engineering group, sold its Howson Alphraphy printing plate business to DuPont in May, the company said that the prospects for the business were limited unless it was combined with a large manufacturer of complementary products.

Expansion minded Brasway hits £3.6m

By Richard Tomkins,
Midlands Correspondent

A LACK of acquisitions during the year to April 28 failed to deter Brasway, the West Midlands-based tube, bar and hydraulic components group, from increasing pre-tax profits by 51 per cent to £3.6m.

Mr Reg Swaby, chairman, said the figures "spoke volumes" for the management's ability to drive the company forward, especially, but predicted that more acquisitions would come this year.

Best performer in the group's portfolio was Eurohydraulics, the manufacturer of hydraulic couplings and hose assemblies bought from Unilever in January 1987, which benefited from improved efficiency and strong demand.

The tube manufacturing and stockholding operations fell short of budgeted profits, but still turned in a strong performance on the back of buoyant demand, particularly from the automotive industry.

The bright bar division also improved profits in the face of severely competitive conditions, while the oil blending side increased pre-tax profits from £262,000 to £221,000.

Group turnover rose from £24.8m to £24.8m. Earnings per share advanced from 4.4p to 6.4p and a final dividend of 1.07625p (1.0175p). A one-for-one scrip issue is also proposed.

Mr Swaby was optimistic about the outlook in spite of the high interest rates. The group would increase market share not by reducing margins, he said, but by improving its products and service.

Yale and Valor

Yale and Valor has announced proposals to merge its small appliance and water heating division to create an electrical products division.

Cityvision views advance to £4.62m

By John Thornhill

A CHANGE in accounting policies and a sizeable earnings programme helped Cityvision, the USM-quoted video hire company, nearly treble pre-tax profits from £1.5m to £4.62m in the six months to May.

The directors are proposing a one-for-one scrip issue to improve the marketability of the shares.

COMMENT

Cityvision has been expanding at a rapid rate but the good news for the company is that enormous market share is still there to be grabbed. The total video hire market is estimated to be over £500m and is at present populated by a host of small retailers. Cityvision has done much to awaken people to the attractions of the market and there are strong rumours that some of the major high-street retailers such as Kingfisher and WH Smith are ready to move in, but even so Cityvision has already established itself as the biggest player and will not be easy to shift.

Since the comparable half, the depreciation period on tapes was increased from 15 to 30 months and this has had the effect of considerably boosting stated profits. On a like-for-like basis profits advanced by 58 per cent.

During the period, the number of Ritz Video Film hire stores was lifted from 185 to 334. Then company also bought Tredegar's Home Entertainment Production Services which run 30 outlets in cash-and-carry warehouses.

Mr Bev Ripley, deputy chairman, said the company was currently opening five to six retail shops a week and was gearing itself up to open seven to eight.

It currently has 370 retail outlets but is aiming to increase this to 1,000 within about two years.

Mr Ripley also said the flow of films being released by Hollywood during the next month would be excellent. "There are some 50 block-busters coming through including *A Fish Called Wanda*, *Die Hard* and *Raiders of the Lost Ark*," he said.

The bright bar division also improved profits in the face of severely competitive conditions, while the oil blending side increased pre-tax profits from £262,000 to £221,000.

Group turnover rose from £24.8m to £24.8m. Earnings per share advanced from 4.4p to 6.4p and a final dividend of 1.07625p (1.0175p). A one-for-one scrip issue is also proposed.

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COMMODITIES AND AGRICULTURE

Colombia seeks ways to increase coffee exports

By Sarita Kendall in Bogota

THE Colombian Government and Federacafe, the coffee growers' federation, are searching for further policy changes to get the country's coffee exports moving following the recent collapse of the International Coffee Agreement and the resulting plunge in world market prices.

In spite of recent measures to make Colombian coffee more competitive, private exporters remain unable to operate profitably on the international market, so the exporting of Colombian coffee is being left to the federation.

The Government has agreed not to lower the domestic support price for the time being. This means that, after taking into account transport and marketing costs, private exporters need to receive in excess of US\$1.05 a lb to make a profit. The recent fall, however, has taken the world price below \$1 a lb.

One solution might be to reverse the "retention" tax usually paid in kind by private exporters, and turn it into an incentive. There is also a 6.5 per cent export tax, which goes to the national coffee fund.

The Government may also decide to allow inflation (run-

ning at 24 per cent a year) to erode the real value of the domestic support price. Normally the price is upgraded once or twice a year to keep it abreast of inflation.

The national coffee fund - devised partly to carry coffee growers through difficult times - has been helped by the relatively small 1988-9 harvest of 11.2m to 11.4m bags (60 kg each) and is liquid enough to buy the next main harvest, which begins in September.

Production capacity is about 13m bags, however, and the country has some 7.5m bags of export quality coffee in stock.

Colombia still hopes to raise its export volume by 20 to 25 per cent, but not at the expense of absurdly low prices.

Coffee earnings had been expected to bring in US\$1.5bn this year, about a quarter of all export receipts.

However, the latest balance of payments calculations by the central bank estimate a shortfall of US\$15m for 1989 and US\$20m for 1990, assuming sales of more than 12m bags.

Meanwhile, the reduction from seven US cents a lb to three cents in Colombian coffee

are steadily declining.

For example, in 1988 Norway farmed about 80,000 tonnes of fish at NKR38 per kilogramme compared with 28,000 tonnes in 1985 at NKR44 per kilogramme.

For the first five months of this year production increased by 53 per cent, or by 31,300 tonnes, at an export value of NKR0.38 per kilogramme compared with an average export price of NKR46.06 per kilogramme in 1988. Export prices are on average about NKR7 per kilogramme over the prices which the fish farmers are paid.

According to Mr Berg, several ways of regulating production are being considered. These including the slaughter of young salmon; freezing or

holding a designated volume of fish until the following year - this would require a commitment to reduce the number of young salmon introduced into the farms. It has also been suggested that up to 30,000 tonnes be processed as animal meal.

Estimates for this year's exports have been put at between 100,000 tonnes to 120,000 tonnes, although production is more likely to exceed 150,000 tonnes because of a milder winter and less diseased fish than in previous years.

Norway's main export markets include France (19,000 tonnes), the US (10,000 tonnes), West Germany (7,500 tonnes) and Denmark (14,500 tonnes).

Salmon farmers 'must curb production'

By Karen Fossli in Oslo

NORWAY'S fish farmers will have to self-regulate annual salmon production volumes in order to keep in step with lower market growth, according to Mr Odd Berg, an official with the Norwegian Fish Farmers' Sales Organisation.

Salmon production is expected to increase by 70 to 80 per cent this year while market growth is estimated to slow to 50 per cent.

Mr Berg said: "Until now it has been possible to increase market share along with production but in future the rate at which production grows will have to be slower than that of the past."

In spite of steady increases in production volumes in recent years prices per kilogramme of salmon exported

are rising sharply, particularly in the last few years.

COO: European free market, min 99.6 per cent, \$ per lb, tonne lots in warehouse, 1,850-1,930 (1,880-1,950).

BISMUTH: European free market, min 99.99 per cent, \$ per lb, tonne lots in warehouse, 235-245 (same).

MOLYBDENUM: European free market, drummed molybodic oxide, \$ per lb Mo, in warehouse, 3,47-3,50 (3,49-3,53).

WEEKLY METALS PRICES

All prices as supplied by Metal Bulletin (last week's prices in parentheses).

ANTIMONY: European free market 99.6 per cent, \$ per tonne, in warehouse, 1,850-1,930 (1,880-1,950).

BISMUTH: European free market, min 99.99 per cent, \$ per lb, tonne lots in warehouse, 470-500 (500 same).

CADMIUM: European free market, min 99.5 per cent, \$ per tonne, in warehouse, 3,47-3,50 (3,49-3,53).

SELENIUM: European free market, min 99.5 per cent, \$ per lb, in warehouse, 5.50-6.00 (5.80-6.10).

TUNGSTEN ORE: European free market, standard min 65 per cent, \$ per tonne unit (10 kg) Wo, cif, 50-63 (51-64).

VANADIUM: European free market, min 98 per cent, \$ per lb Vo, cif, 5.45-5.75 (5.30-5.70).

URANIUM: Nuexco exchange value, \$ per lb, UO, 9.30 (same).

LONDON MARKETS

LONDON METAL Exchange copper prices yesterday resumed their recent rally following Monday's shake-out. Prices were pared back towards close because of dollar weakness but the cash position still ended up 643 up on the day at £1,553 a tonne, while the three month quotation closed at £1,520.50 a tonne, up £36. Dealers noted, however, that the three-day price was not unusual before the "spikes" of £2,440 a tonne, and appeared still to be held by resistance around that area. Zinc prices remained some of Monday's sharpest fall as concern about the situation in Peru (both guerrilla activity against mines and a threatened miners' strike), coupled with news that the expected lifting of the force majeure at Spain's Asturiana had not yet been implemented, boosted the cash price 25¢ to \$1,645 a tonne.

SPOT MARKETS

Crude oil (per barrel FOB) + or -

Dubai 815.15-6.25+ -0.15

Brent Blend 517.95-8.10W -0.22

WTI (1 pt cut) 328.30-3.35C -0.07

Oil products (NWE prompt delivery per tonne CIF) + or -

Premium Gasoline 3200-201 -1.5

Gas Oil 3149-150 +1.4

Heavy Fuel Oil 328.92+ +2.5

Naphtha 517.10-160 -1

Petroleum Argus Estimate + or -

Sold (per tonne) + or -

Silver (per tonne) 3271.25

Platinum (per tonne) 560.65 -1.65

Palladium (per tonne) 514.85 -2.15

Aluminum (free market) 571.15 +55

Copper (US Producer) 117.5-112c

Lead (US Producer) 38.5c

Mercury 25.25c

Tin (Kuala Lumpur market) 435.25c -0.45

Tin (New York) 435.25c -17.0

Zinc (US Prime Western) 80c a tonne

Cattle (live weight) 118.29p -0.27*

Sheep (dead weight) 160.49p -14.5*

Pigs (live weight) 80.89p -1.84*

London Cally sugar (raw) 334.8t -2.0

London Cally sugar (white) 545.20t +1.0

Tea and Lycap export prices 338.0t -1.5

Barley (English feed) 510.25

Maize (US No. 3 yellow) 513.75

Wheat (US Great Northern) 512.25t -1.25

Rubber (spun) 60.00p

Rubber (Aug/Sept) 60.00p

Rubber (Sep/Oct) 62.75p

Rubber (KL RRS No 1 Aug) 250.5m -1.5

Cocaine oil (Philippines) 5200-5500 -5.0

Palm Oil (Malaysian) 532.5t

Copra (Philippines) 534.0t

Soybeans (US) Unq.

Cotton "A" Index 53.30c +0.50

Wooltops (6ds Super) 60.00p

Cotton (100% cotton) 5.70c

Cotton (100% cotton) 5.7

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FT UNIT TRUST INFORMATION SERVICE

Current Unit Trust Prices are available on FT Cityline. To obtain your free Unit Trust Code booklet ring the FT Cityline help desk on 01-925-2123

Std Price	Offer Price	+/-	Yield	Std Price	Offer Price	+/-	Yield	Std Price	Offer Price	+/-	Yield	Std Price	Offer Price	+/-	Yield	Std Price	Offer Price	+/-	Yield	Std Price	Offer Price	+/-	Yield
Pension Life Assurance Co Ltd				Prestigious Life Pensions Ltd				Scottish Equitable Life Assurance Co Ltd				Target Life Assurance Co Ltd-Custod.				PB Fund Management Ltd				Standard Brandt Germany Mgmt Ltd			
37.9 Permanent Real Estates North America	0.044 43721	-1.0		Prudential Life Pensions Ltd-Custod.				Scotia Life Assurance Co Ltd-Custod.				First Bond	147.0	-0.2		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
50.0	300.0	-7.6		Small Commercia	106.3	-0.0		Special Features	177.0	-0.4		Managed Portfolio	150.5	-1.0		SFC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Equity Fund	180.0	-0.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Corporate Bond	119.0	-12.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Equity Fund	180.0	-0.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Corporate Bond	119.0	-12.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Global	48.0	-0.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Hedge Fund	180.0	-0.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
International Equity	190.0	-21.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Japan	14.0	-0.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Property	260.0	-26.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Property Fund	260.0	-26.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Real Estate Fund	170.0	-0.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
UK Equity	170.0	-0.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
UK Equity	170.0	-0.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Private Life & Pensions Co Ltd				Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Standard Life & Pensions Co Ltd	0.039 73723			Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Life Fund	140.0	-0.0		Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
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Standard Life & Pensions Co Ltd	0.039 73723			Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Standard Life & Pensions Co Ltd	0.039 73723			Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Standard Life & Pensions Co Ltd	0.039 73723			Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Standard Life & Pensions Co Ltd	0.039 73723			Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd	11.21		
Standard Life & Pensions Co Ltd	0.039 73723			Small Investors	106.3	-0.0		Small Investors	177.0	-0.4		Managed Portfolio	150.5	-1.0		SGC Fund Mgmt Ltd	100.0	-0.1		SGC Fund Mgmt Ltd			

FT UNIT TRUST INFORMATION SERVICE

LUXEMBOURG (2)

OFFSHORE INSURANCES

LONDON SHARE SERVICE

BRITISH FUNDS

BRITISH FUNDS—Contd

BRITISH FUNDS							BRITISH FUNDS—Contd.						
1969 High Low	Stock	Price £	+ or -/-	Yield Int. / Div.	1969 High Low	Stock	Price £	+ or -/-	Yield Int. / Div.				
99.50	98.30	Exch 10pc 1969	-	-	99.30	94.10	Conversion 9½ pc 2004...	-	98.30	-	9.60		
99.50	98.10	Exch 11pc 1969	-	-	100.50	94.90	Conversion 9½ pc 2005	-	99.50	-	9.70		
98.50	95.70	Trust 5½ pc 1966-69	-	-	111.50	102.50	Exch 12pc 2005	-	107.50	-	9.70		
99.50	95.00	Exch 10½ pc 1969	-	-	124.50	115.50	Trust 12pc 2003-05	-	126.50	-	10.60		
101.50	99.10	Trust 13pc 1969-70	-	-	90.50	86.50	Trust 8pc 2002-06st	-	87.50	-	9.10		
130.50	124.00	Trust 2ec 11. (90/64.5)	-	-	105.50	97.50	Conversion 9pc 2006	-	101.50	-	10.10		
99.50	98.10	Exch 11pc 1969-70	-	-	118.50	109.50	Trust 11½ pc 2003-07	-	114.50	-	10.20		
102.70	99.70	Exch 12pc 1969-70	-	-	91.50	87.50	Trust 8½ pc 2007	-	92.50	-	9.70		
94.50	91.20	Trust 3pc 1969	-	-	134.50	125.50	Trust 13pc 04-08	-	128.50	-	10.40		
96.50	95.50	Trust 8½ pc 1967-90	-	-	94.50	81.50	Trust 9pc 2006	-	94.50	-	9.20		
98.50	95.50	Trust 8pc 1960-70	-	-	101.50	92.50	Trust 8pc 2009	-	98.50	-	9.00		
98.50	95.50	Trust 8pc 1960-70	-	-	102.50	95.50	Conv 9½ Lo 2011 st	-	97.50	-	9.00		
98.50	95.50	Trust 10pc 1970	-	-	97.50	85.50	Trust 5½ pc 2005-12st	-	97.50	-	9.00		
91.50	87.50	Exch 12pc 1969	-	-	10.20	11.98	Trust 7½ pc 2012-15st	-	86.50	-	8.40		
101.50	98.50	Trust 11pc 1970	-	-	9.50	8.50	Trust 7½ pc 2012-15st	-	86.50	-	8.40		
92.50	89.50	Funding 5½ pc 1971-72	-	-	11.77	11.83	Exch 12pc 13-17	-	120.50	-	9.50		
98.50	96.50	Trust 3pc 1969	-	-	6.22	10.64							
100.50	95.50	Trust 10pc Cr 91/2	-	-	3.55	9.38							
101.50	97.50	Exch 11pc 1970	-	-	10.20	12.54							
94.50	91.50	Trust 8pc 1967	-	-	11.00	11.37							
106.50	102.50	Trust 12½ pc 1969-74	-	-	8.50	10.50							
99.50	95.50	Trust 10pc 1962	-	-	12.50	11.01							
94.50	91.50	Trust 8pc 1962	-	-	10.24	11.08							
100.50	96.50	Trust 10½ pc Cr 1970/74	-	-	8.50	11.11							
85.50	82.50	Trust 3pc 1962	-	-	10.54	10.03							
105.50	101.50	Exch 12½ pc 92	-	-	3.50	9.27							
109.50	104.50	Exch 13½ pc 1972	-	-	11.57	10.99							
94.50	90.50	Trust 8½ pc 1963	-	-	12.50	10.89							
100.50	95.50	Trust 10pc 1962	-	-	8.50	10.78							
108.50	103.50	Trust 12½ pc 1969-74	-	-	10.21	10.44							
87.50	84.50	Funding 5pc 1963-68	-	-	11.52	10.58							
113.50	108.50	Trust 13½ pc 1972	-	-	6.99	10.24							
110.50	105.50	Exch 12½ pc 1972	-	-	12.43	10.61							

COMMONWEALTH & AFRICAN LOANS

LOANS

Public Board and Ind.
471 455 Ret. Wtr. 3pc 'B' | 461 | 6.

Fig. 6. - 2.5 pc.

DATA BANK AND SITES

101-6	94-6	Conversion 10pc 1995	97-5	10.20	10.38	June 1997: 115.4.
119-5	110-4	Treas 13-4 pc 1997	114-5	11.60	10.47	
108-5	97-5	Exch 10pc 1997	108-5	10.45	10.39	
128-5	120-5	Treas 13-4 pc 1998	125-5	12.11	10.59	
128-5	120-5	Treas 15-4 pc 1997	125-5	10.05	10.27	
100-5	93-5	Exch 9-4 pc 1998	91-5	8.25	9.58	
134-	78-5	Treas 6-4 pc 1995-96H	129-5	11.90	12.00	
134-	125-	Treas 15-4 pc 1998	109-5	10.94	10.37	
113-5	105-5	Exch 12-4 pc 1998	109-5	10.94	10.37	
100-5	95-5	Treas 9-4 pc 1995-96H	97-5	9.70	9.98	
115-5	107-5	Exch 12-4 pc 1999	111-5	11.01	10.36	
105-5	97-5	Treas 10-4 pc 1998	101-5	10.30	10.30	
104-2	96-5	Conversion 10pc 1998	100-5	10.22	10.21	

CORPORATION LOANS

Continued on next page

Money Market Bank Accounts

Money Market Trust Funds

Charities Aid Funds Money Magnet Co Ltd
 2nd Flr, Stone Ct, Wootton Bassett, Wiltshire, BA1 3JL
 Tel: 012-49 10-16 14-00 14-43 3-min
 CAFCASH Call Fund: 12-00 10-16 14-00 14-43 3-min
 CAFCASH 7-day Fund: 15-31 10-41 14-00 14-43 3-min
The Charities Deposit Fund
 2 Fore Street, London EC2Y 5AU
 Deposit 13.35 - 01-506 1813
 Net CAFC 1m Cr
 Gross Cr Equity
 Premiums are held by CAFCASH until indicated and then
 forwarded to you with profit refer to U.S. dollars. VISA
 allows for all bank holding expenses. Prices of certain older
 insurance linked plans subject to capital gains tax on some
 states. It Distribution free of UK VAT, a POF
 (Professional Organization Fund) is available.
 Premiums are held by CAFCASH until indicated, x Offshore
 offices holding all expenses except agent's commission
 Yield before day's price, 20 January price + Standard
 Yield before day's price, 20 January price + Offshore
 Premiums are held by CAFCASH until indicated, x Offshore
 offices holding all expenses except agent's commission
 rates of NAV increases, as of December, 40% Fund and 50%
 received.

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AMERICANS—Contd

BUILDING, TIMBER, ROADS—Contd

DRAPERY AND STORES—Contd

ENGINEERING—Contd

INDUSTRIALS (Miscel.)—Contd

INDUSTRIALS (Miscel.)—Contd

Year	Name	Stock	Price	No.	Dr.	Cy.	Y/H	High	Low	Stock	Price	No.	Dr.	Cy.	Y/H	High	Low	Stock	Price	No.	Dr.	Cy.	Y/H	High	Low	Stock	Price	No.	Dr.	Cy.	Y/H	High	Low
1989	1st FPL Group Inc.	29	19.7	1	+	1	1.0	21.2	18.5	1474	14.5	1	+	1	1.0	16.2	14.2	1480	14.0	1	+	1	1.0	14.5	12.4	1490	13.0	1	+	1	1.0	12.4	10.4
223	275 Ford Motor Sl.	30	51.00	1	0	0	1.0	51.25	49.75	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
458	276 GATX 62% v.	45	1.00	1	0	0	1.0	29.7	29.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
224	277 Gen Elec Co.	15	1.00	1	0	0	1.0	30.0	29.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
304	278 Gen Electr Corp	40	1.00	1	0	0	1.0	30.5	29.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
987	279 Gen Am First Step Sl.	10	1.00	1	0	0	1.0	4.7	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
224	280 Gen Electr Corp	12	1.00	1	0	0	1.0	4.7	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
523	281 Gen Elec Inds	13	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
213	282 Gen Elec Inds	14	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	283 Gen Elec Inds	15	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
213	284 Gen Elec Inds	16	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	285 Gen Elec Inds	17	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	286 Gen Elec Inds	18	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	287 Gen Elec Inds	19	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	288 Gen Elec Inds	20	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	289 Gen Elec Inds	21	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	290 Gen Elec Inds	22	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	291 Gen Elec Inds	23	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	292 Gen Elec Inds	24	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	293 Gen Elec Inds	25	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	294 Gen Elec Inds	26	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	295 Gen Elec Inds	27	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	296 Gen Elec Inds	28	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	297 Gen Elec Inds	29	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	298 Gen Elec Inds	30	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+	1	1.0	10.0	8.5
261	299 Gen Elec Inds	31	1.00	1	0	0	1.0	4.8	4.5	211	14.5	1	+	1	1.0	10.0	8.5	150	12.0	1	+	1	1.0	10.0	8.5	150	11.5	1	+</td				

LONDON SHARE SERVICE

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WORLD STOCK MARKETS

AUSTRIA			FRANCE (continued)		
July '38	Exch.	+ or -	July '38	Exch.	+ or -
Austrian Airlines	2,150	-10	Athlon	637	+15
Creditanstalt	2,750	-40	Arbeits-Primer	2,572	+15
Gesesa	3,850	-10	Automobiles E.R.C.	1,0002	+10
Internat.	19,100	-100	BIC	765	+10
Jugendzentrale	15,100	-100	E.S.M.	574	+10
Liechtenstein	630	-10	Electro-Che	399	+10
Permoser	1,440	-10	EMP-Gart-Land	578	+10
Rathaus	1,400	-10	Esso-Deutsch	578	+10
Sapient.	243	-10	Dr. Coss	417	+10
Stier-Uhrwerk	134	-10	Franziska	2,935	+10
Volkshilf	812	-10	Gespann	721	+10
Veritas	176	-10	GMG	572	+10
BELGIUM/LUXEMBOURG					
July '38	Exch.	+ or -	Belgium		
Arbed	6,270	-50	Alumin	1,165	+10
B.E.L.	3,410	-50	Aluminium	1,092	+10
Bank Belg. & Lux.	15,600	-100	Amal	1,092	+10
Banque Gen. Du Luxembourg	14,500	-100	Amoco	1,092	+10
Banque Natl. Belg.	57,025	-100	Anglo-Belg.	1,092	+10
Schaffert B.	14,025	-75	Anglo-France	1,092	+10
Central C.B.P.	5,920	-50	Anglo-Gulf	1,092	+10
Do. AFV 1	5,900	-50	Anglo-Petrol	1,092	+10
Do. AFV 2	5,820	-50	Anglo-Sud	1,092	+10
Centrafin	544	-10	Anglo-Suisse	1,092	+10
Centrafin	16,225	-100	Anglo-Swiss	1,092	+10
Centrafin	5,900	-50	Anglo-Swiss	1,092	+10
EDFES	4,275	-50	Anglo-Swiss	1,092	+10
Do. AFV 1	4,280	-50	Anglo-Swiss	1,092	+10
Do. AFV 2	4,280	-50	Anglo-Swiss	1,092	+10
Anglo-Suisse Int.	720	-10	Anglo-Swiss	1,092	+10
GIB-Car	5,920	-50	Anglo-Swiss	1,092	+10
Do. AFV	5,920	-50	Anglo-Swiss	1,092	+10
GBI-Denmark	4,220	-50	Anglo-Swiss	1,092	+10
Do. AFV 1	4,220	-50	Anglo-Swiss	1,092	+10
Do. AFV 2	4,220	-50	Anglo-Swiss	1,092	+10
Gebr. Gobell	1,045	-5	Anglo-Swiss	1,092	+10
Do. AFV	1,020	-10	Anglo-Swiss	1,092	+10
Generale Belge	2,200	-10	Anglo-Swiss	1,092	+10
Do. AFV 1	2,180	-10	Anglo-Swiss	1,092	+10
Do. AFV 2	2,200	-10	Anglo-Swiss	1,092	+10
Gebr. Gobell	5,920	-50	Anglo-Swiss	1,092	+10
Habermann	17,350	-100	Anglo-Swiss	1,092	+10
Do. AFV	17,350	-100	Anglo-Swiss	1,092	+10
Intercom	1,500	-10	Anglo-Swiss	1,092	+10
Do. AFV 1	1,490	-10	Anglo-Swiss	1,092	+10
Do. AFV 2	1,490	-10	Anglo-Swiss	1,092	+10
Kredietbank	4,275	-50	Anglo-Swiss	1,092	+10
Petrolgas	14,350	-100	Anglo-Swiss	1,092	+10
Petroflex	12,375	-100	Anglo-Swiss	1,092	+10
Raffineries Tiris	2,925	-50	Anglo-Swiss	1,092	+10
Royal Belge	5,650	-10	Anglo-Swiss	1,092	+10
Do. AFV 1	5,620	-10	Anglo-Swiss	1,092	+10
Do. AFV 2	5,600	-10	Anglo-Swiss	1,092	+10
Soc Gen Belge	3,025	-10	Anglo-Swiss	1,092	+10
Do. AFV	3,020	-10	Anglo-Swiss	1,092	+10
Sofins	12,450	-100	Anglo-Swiss	1,092	+10
Sohng	17,740	-100	Anglo-Swiss	1,092	+10
Stampfli Ind.	180	-10	Anglo-Swiss	1,092	+10
Testosteron	6,650	-10	Anglo-Swiss	1,092	+10
Do. AFV	6,600	-10	Anglo-Swiss	1,092	+10
Trasital	9,750	-100	Anglo-Swiss	1,092	+10
Do. AFV 1	9,700	-100	Anglo-Swiss	1,092	+10
Do. AFV 2	9,600	-100	Anglo-Swiss	1,092	+10
Do. AFV 3	9,750	-100	Anglo-Swiss	1,092	+10
UICB	11,725	-100	Anglo-Swiss	1,092	+10
Do. AFV	11,750	-100	Anglo-Swiss	1,092	+10
Uicos	2,525	-10	Anglo-Swiss	1,092	+10
Do. AFV 1	2,505	-10	Anglo-Swiss	1,092	+10
Do. AFV 2	2,500	-10	Anglo-Swiss	1,092	+10
Waggon-Lits	8,420	-100	Anglo-Swiss	1,092	+10
Do. AFV	7,900	-100	Anglo-Swiss	1,092	+10

GERMANY (continued)	
July 28	Sec.
Bauknecht	220
Bayer	229.5
Bayer-Alps	231
BMW	261.5
Bayer-Vorso	235
Bebekofen	222
Berliner Kult	214.5
BASF-Steck	224
Benteler & Berg	245
Bronx Bawerl	247
Calanda Vertrieb	705
De. Prof.	165
Commerzbank	277
Continental AG	314.5
DLW	225
Duisburg-Benz	716
Deutsche PTJ	195
Dreyfus	468.5
Deutsche Bank	225
Deutsche Rent	225
Dillinger Werke	221
Douglas Flugze	225
Dragonwerk	224.5
Dresdner Bank	224
Eag. Kapitalfonds	205
Felicitas Reisen	225
Flottmann	225
Gothaer CDP	225.5
Hannover Elekt	227
Hannover Lloyd	227
Hannover Re	226
Hannover Re Zent	228
Haniel Prof.	212.4
Hausf	224
Hausfeld	225.5
Hausnet	222.7
Hausg	221.5
Holzhausen U.P.	220.2
Horten	220
Industriehaus	224
Industria Werke	229
Kell & Salz	216
Klaesche	225
Kaufhof	217.5
KHD	222
Krausnicker Werke	226
Kräf. Werke AG	225
Lahmeyer	225
Leifheit	225
Linde	220
Lohmann	224.5
Dr. M. W. Prof.	226.5
MAM	221
Dr. Prof.	226.5
Mannesmann	221
Mannesmann Vers	218
Mercedes Benz	225
Messingwerk	224
Messch Reich	222.5
Mitsubishi	225.5
PWMA	229.5
Philips Konsum	221
Poosche	227.5
Prossen	226
Rheinmetall	1,590
Rhein West.Elect.	228.7
Do. Prof.	220.5
Rheinmetall Bet	220
Do. Prof.	220
Rheinmetall	220
Schaeffler	225
Schmitz-Loh	224
Siemens	224
Sieger-Vig Re	222
Siemens	224

ITALY-Continued		
July 18	Loss	+ or -
SIP	3,225	-55
Sirsa A	10,525	+175
Sirsa	2,400	-15
SASS	5,530	+50
Sassari	36,500	+100
Sard Sar.	9,750	-51
SAMI	1,205	+25
Sata EPD	3,245	+103
Toro Astoria	22,200	+200
Toti Fratelli	30,600	+100
Volks	24,200	+800
 NETHERLANDS		
July 18	Fls.	+ or -
ADF Holding	57.00	-0.4
AEGON	102.70	-0.7
Aeroflot	119.20	+0.2
AKZO	142.00	-1
ARM	44.20	-0.5
ARKEV	54.40	-1
AMRO	88.10	-1.4
Amro Leusden	145.70	-0.5
Baarnstede/Wiley	132.00	-15
Baumwolle-Tel	44.50	-0.7
Cater Peers	45.30	-0.9
Centraal-Satelliet	64.40	+0.4
CSKA	125.40	-1.4
Dordrecht Petroleum	257.70	-0.3
Echter Dier	74.60	-0.1
Fokker	43.20	+1
Groeneweg	84.20	-0.5
Het Broekje	52.70	-0.2
Holl. Bank	211.00	-0.8
Hollandia	114.00	-1
Huizer Duvels	116.00	-1
IHC Cultuur	31.90	-1
Jan Meijer	180.30	-0.5
KLM	50.50	-0.5
Knops	14.30	-0.5
KNP	26.2	-0.6
Knudsen Corp.	45.30	-0.5
Ned Mid Bank	259.00	-0.6
Nederland	458.50	-0.5
Nederland-Tex Co.	99.50	+0.2
Nederlandse Ver. B.	55.37	-1
Ned Grivita	308.00	-1
Nederlandse Glasm.	45.30	-1.4
Patchen	240.00	-0.8
Papagei	39.50	-0.1
Parco	186.30	-1
Parfums	158.60	-0.1
Parfums	104.30	-0.1
Parrot	62.00	-0.1
Royal Dutch	141.70	-0.1
Rijksoverheid	148.40	-0.1
Rijkspost	37.10	+0.2
RIV	98.00	-12
Rivierenland	59.20	+0.2
Rijksoverheid Klaarw.	49.90	+0.2
 NORWAY		
July 18	Kroner	+ or -
Nor	63.50	-0.5
Norges Bank	189.00	-2
Norges B.	322.50	-3.5
Norsk Hydro	117.00	-1
Norsk Norka Credit	124.00	-1
Nore Ind.	99.00	-1
Nore	331.50	-2
Norsk Hydro A	151.00	-1

WEIBER	Jahre	Kreuzer	+ or -
Gia B (Free)	254		
Hilma-Liesel B (Free)	700		+10
Ilse A (Free)	575		-10
Ilse B (Free)	575		-10
Ilse E (Free)	350		-10
Ilse Cocco A (Free)	592		-10
Ilse Elektronik B (Free)	240		-10
Ilse Flossie B (Free)	575		-10
Ilse Gute B (Free)	208		-10
Ilse Hause B Free	145		-10
Ilse Ich Dose B Free	380		-10
Ilse Informatic B (Free)	198		-10
Ilse Klima B Free	259		-10
Ilse Klavikord B (Free)	242		-10
Ilse Klavier (Free)	242		-10
Ilse Klavier und	255		-10
Ilse Klavier und	165		-10
Ilse Klavier X (Free)	165		-10
Katzenburg A (Free)	627		-10
Katzenburg C (Free) in Urvorw.	157		-10
Katzenburg D (Free)	159		-10
Katzenburg E (Free)	167		-10
Katzenburg F (Free)	167		-10
 SWITZERLAND			
WY 28		Frs.	+ or -
Barbara		8,290	-10
Bettina		1,223	-10
Claudia A. Ptg. Certis		59	-10
Christiane Hilti Ptg		2,140	-10
Christiane Lutz		2,475	-10
Doris Ptg		360	-10
Eva Schmid		1,015	-10
F. Ptg.		461	-10
Heidi Hilti		2,565	-10
Hildegard von Gagern		4,070	-10
Hildegard von Gagern		3,000	-10
Hildegard von Gagern		3,005	-10
Hildegard von Gagern		1,720	-10
Hildegard von Gagern (Kinder)		1,750	-10
Hildegard von Gagern		262	-10
Hildegard von Gagern		2,900	-10
Hildegard von Gagern		5,990	-10
Hildegard von Gagern		7,000	-10
Hildegard von Gagern		2,220	-10
Hildegard von Gagern		365	-10
Hildegard von Gagern		5,980	-10
Hildegard von Gagern		600	-10
Hildegard von Gagern		2,550	-10
Hildegard von Gagern		1,120	-10
Hildegard von Gagern		100	-10
Hildegard von Gagern		1,075	-10
Hildegard von Gagern		2,750	-10
Hildegard von Gagern		1,650	-10
Hildegard von Gagern		7,720	-10
Hildegard von Gagern		7,320	-10
Hildegard von Gagern		1,155	-10
Hildegard von Gagern		1,800	-10
Hildegard von Gagern		365	-10
Hildegard von Hohenstaufen (Bar)		37,750	+1,000
Hildegard von Hohenstaufen (Bar)		16,750	+1,000
Hildegard von Hohenstaufen (Bar)		12,250	+1,000
Hildegard von Hohenstaufen (Bar)		2,225	+1,000
Hildegard von Hohenstaufen (Bar)		6,200	+1,000
Hildegard von Hohenstaufen (Bar)		1,800	+1,000
Hildegard von Hohenstaufen (Bar)		555	+1,000
Hildegard von Hohenstaufen (Bar)		5,100	+1,000
Hildegard von Hohenstaufen (Bar)		1,190	+1,000
Hildegard von Hohenstaufen (Bar)		355	+1,000
Hildegard von Hohenstaufen (Bar)		265	+1,000
Hildegard von Hohenstaufen (Bar)		11,775	+1,000
Hildegard von Hohenstaufen (Bar)		1,840	+1,000

Sector	Stock	High	Low	Ch.
22691 Comline	\$26	25	25	-
34070 Comptech	450	440	440	-
60350 Commonwealth	57%	55%	55%	-
42600 Com TVX	85	80	80	-
37750 Crestex Gas	53%	50%	50%	-
18620 Credit Suisse	125	120	120	-
122657 Corotex A 1	35%	32	32	-
124180 Cromax A 1	35%	32	32	-
780 Danisco	35%	32	32	-
34777 Dawson B 1	65%	60	60	-
60250 Dawson	370	340	340	-
12343 Dawson A 1	65%	60	60	-
15922 Deltone	25%	20	20	-
50012 Dentsu	210	190	190	-
15601 Dentsu	30%	25	25	-
12260 Denton	100	90	90	-
27000 Denzmark	53%	50%	50%	-
14200 De Pinto A	35%	27	27	-
65225 Dylex A	51%	11	11	-
42500 Ebasco Corp	50%	45	45	-
24000 Empresaria	51%	45	45	-
11400 Enbridge	57%	75	75	-
122200 Englehard A	450	400	400	-
81005 FCA Ind	50%	45	45	-
55200 FFI Corp	57%	75	75	-
104330 Fleischman	25%	20	20	-
60020 Fed Ex Ind	140	135	135	-
16200 Fed Plus	50%	45	45	-
94300 Flx Traco	100	90	90	-
19200 Flaming L	11%	12	12	-
100 4Cby Fin	500%	100	100	-
10200 Filarmaria T	50	50	50	-
25000 Financier	22%	22	22	-
13000 Four Seasons	53%	37	37	-
9000 Franco C	51	50	50	-
58644 GAW Unit	524	28%	28%	-
12100 Galactis	315	310	310	-
41200 Generali	55%	65	65	-
21500 Generali A	58%	71	71	-
58000 Generali T	110	100	100	-
71000 Goldcorp f	450	350	350	-
24000 Glv Kalgro	50%	45	45	-
100 Grotan A 1	50%	45	45	-
23000 Grumman	32%	31%	31%	-
12000 GLG Group	520	450	450	-
44500 GM Lifesc	515%	105%	105%	-
11000 Greyhound	52%	50	50	-
30622 Gte Res	514%	104	104	-
200 Halyard	50%	45	45	-
22268 Heurtte A	55	450	450	-
10088 Hewlett	520%	200	200	-
677 Hayes	515	15	15	-
58200 Heusen Ind	520%	300	300	-
249767 Hilti	514%	104	104	-
40000 Hollinger	514%	142	142	-
476700 Homestake 1	317%	714	714	-
57000 H Bway Co	500%	250	250	-
104074 Immoco L	500%	250	250	-
144405 Impco Q C A	500	500	500	-
703000 Intercon	500%	250	250	-
12755 Interpace	500%	250	250	-
220700 Interstar New City	500%	250	250	-
72000 Intertronics	500%	250	250	-
70000 Int'l Corp	500%	250	250	-
600 Interco	517%	774	774	-

Class	Chng	Sales	Stock
115	-		
116	+ 1		
117	+ 1		
118	- 1		
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INDICES

NEW YORK DOW JONES

	July 27	July 14	July 13	July 12	1989		Since compilation	
	High				High	Low	High	Low
Industrials	2554.49	2554.82	2558.32	2552.63	2554.82	2144.64	2722.42	41.22
Ave Bonds	—	—	—	—	(4.07)	53.01	(25.88)	(27.52)
Transport	92.91	93.02	92.91	93	93.02	87.35	—	—
Utilities	1229.30	1210.54	1194.70	1196.31	1229.30	959.95	1229.30	12.52
Ave Stocks	—	—	—	—	(17.17)	223.92	(37.75)	(59.75)
Ave Bonds	—	—	—	—	(1.01)	22.11	(2.01)	(2.01)
Ave Corp. Bonds	—	—	—	—	(1.01)	181.84	(22.43)	(22.43)
Ave Muni Bonds	—	—	—	—	(1.01)	181.84	(22.43)	(22.43)
Ave Preferred	—	—	—	—	(1.01)	181.84	(22.43)	(22.43)

	16	17	14	13	High	Low
AUSTRALIA						
All Orbitaries (1,1780)	1565.0	1563.3	1568.1	1566.7	1563.7 (23/5)	1432.9 (7/4)
All Mining (1,1780)	718.2	725.9	718.2	727.6	727.0 (26/1)	652.5 (7/4)
AUSTRIA						
Credit Balances (30/12/89)	348.21	349.50	349.47	350.36	346.67 (21/6)	219.5 (2/1)
BELGIUM						

CANADA | 加拿大 | 加拿大 | 加拿大 |

Symbol	May				June	
	17	14	13	12	High	Low
Gold & Minerals	3348.5	3371.9	3350.0	3320.4	3364.9 (5/22)	3327.5 (5/21)
Composite	3302.6	3349.3	3362.5	3357.5	3364.8 (5/21)	3320.5 (5/21)
MONTREAL Portfolio	1949.76	1947.06	1939.29	1933.24	1949.76 (5/21)	1877.48 (5/21)

NEW YORK ACTIVE STOCKS

Symbol	Stocks traded	Closing price	Change	Stocks traded	Closing price	Change	
Moody's	5,023,700	129	+ 1/2	Union Carbide	1,154,600	204	+ 1/2
Coron Labs	—	—	—	Gen Electric	1,141,200	245	—
Trans Canada	3,516,200	225	+ 1/4	AT&T	1,126,500	264	+ 1/2
Trans Amic	1,204,200	117	+ 1/2	Motorola	1,037,500	582	+ 2/4
E&G	1,421,100	118 1/2	+ 1/2	McDonnell	1,029,500	284	+ 2/4
	1,240,000	271	- 1/2				

In values of all indices are 300 except NYSE All Common—50; Standard and Poor's—10; and Toronto Composite—100. Toronto indices based 1973 and Montreal Portfolio 4/1/73. * Excluding bonds, utilities, plus Utilities, Financial and Transportation. (5) Closed. (6) Unavailable.

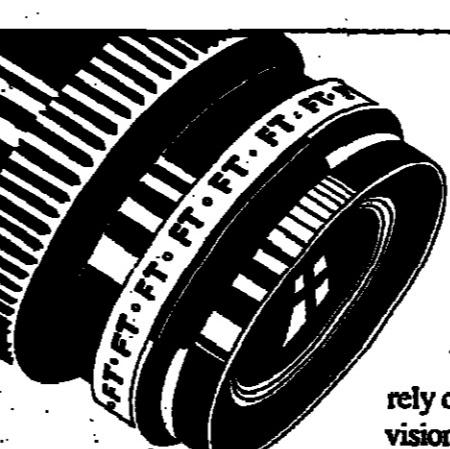
JSE Cos/Ind/78	1571.0	1574.0	1581.0	1585.0	1591.0	1592.0	1592.0
JSE Industrial/25/78	2655.0	2657.0	2655.0	2655.0	2670.0	2670.0	2670.0
SPAIN							
Madrid SE Crx/12/83	302.20	303.35	304.07	303.95	315.90	315.90	316.61
SWEDEN							
Jacobson & P. Cr/12/56	4370.4	4377.0	4378.8	4391.1	4391.1	4391.1	4391.1
SWITZERLAND							
Swiss Bank Ind. Cr/12/59	757.0	758.9	759.3	759.0	759.5	759.5	761.1
WORLD							
M.S. Capital Ind. Cr/1/70	00	517.3	521.0	522.7	522.7	523.0	527.6

these values of all indices are 100 except Brussels SE and DAX – 1,000 JSE Gold – 255.7 JSE Industrials – 266.3 and Australia All Ordinary and Mining – 500; (c) Closed; (x) Unavailable.

Portfolio ... 1949.76 1947.06 1939.29 1933.26 1949

TOKYO - Most Active Stocks			
	Stocks traded	Closing price	Change
day	5,063,700	105.0	+ 8.0
35	5,516,200	105.0	+ 1.4
	1,028,200	104.5	+ 1.5
	1,401,100	114.0	+ 1.0
	1,240,000	22.7	-
	Union Carbide		
	Gas Electric		
	AT&T		
	Mitsubishi		
	McDonald's		
	Stocks traded	Closing price	Change
	1,154,400	50.0	+ 1.0
	1,141,000	51.0	-
	1,268,000	50.0	-
	1,007,700	50.0	+ 1.0
	1,024,700	50.0	-

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NEW YORK STOCK EXCHANGE COMPOSITE PRICES

3pm prices July 18

NYSE COMPOSITE PRICES

Continued from previous Page

	PY Div	Div. Yld.	High	Low	Close	Chg.			PY Div	Div. Yld.	High	Low	Close	Chg.			PY Div	Div. Yld.	High	Low	Close	Chg.		
	Stock		Yld.	Stock	Close	Chg.	Prev.		Stock		Yld.	Stock	Close	Chg.	Prev.		Stock		Yld.	Stock	Close	Chg.		
1	3-16 PivOkt		0.00	3-16	3-16	-	-		25 Sunbelt		0.00	25	25	-	-	-	16 Univer		0.00	16	16	-	-	
2	3-16 Robin		0.00	3-16	3-16	-	-		26 Sunbelt Jrs		0.00	26	26	-	-	-	17 Unifit		0.00	17	17	-	-	
3	21-3 PivRobm		0.00	21-3	21-3	-	-		27 Sunbelt Jrs		0.00	27	27	-	-	-	18 Unifit		0.00	18	18	-	-	
4	21-3 PivRobm		0.00	21-3	21-3	-	-		28 Sunbelt Jrs		0.00	28	28	-	-	-	19 Unifit		0.00	19	19	-	-	
5	74-4 RockNT 1.50	7.1	12	612	300	-	-		29 Sunbelt Jrs		0.00	29	29	-	-	-	20 Unifit		0.00	20	20	-	-	
6	74-4 RockNT 1.50	7.1	12	612	300	-	-		30 Syntex		0.00	30	30	-	-	-	21 Unifit		0.00	21	21	-	-	
7	74-4 RockNT 1.50	7.1	12	612	300	-	-		31 Syntex		0.00	31	31	-	-	-	22 Unifit		0.00	22	22	-	-	
8	20-18 RockCir 1.50	16.0	18	170	170	-	-		32 Syntex		0.00	32	32	-	-	-	23 Unifit		0.00	23	23	-	-	
9	9-4 RockR	0.00	9-4	17	325	-	-		33 Syntex		0.00	33	33	-	-	-	24 Unifit		0.00	24	24	-	-	
10	9-4 RockR	0.00	9-4	17	325	-	-		34 Syntex		0.00	34	34	-	-	-	25 Unifit		0.00	25	25	-	-	
11	20-18 RockR	0.00	20-18	17	325	-	-		35 Syntex		0.00	35	35	-	-	-	26 Unifit		0.00	26	26	-	-	
12	15-6 RockR	0.00	15-6	17	325	-	-		36 Syntex		0.00	36	36	-	-	-	27 Unifit		0.00	27	27	-	-	
13	15-6 RockR	0.00	15-6	17	325	-	-		37 Syntex		0.00	37	37	-	-	-	28 Unifit		0.00	28	28	-	-	
14	15-6 RockR	0.00	15-6	17	325	-	-		38 Syntex		0.00	38	38	-	-	-	29 Unifit		0.00	29	29	-	-	
15	6 RockR	0.00	6	17	325	-	-		39 Syntex		0.00	39	39	-	-	-	30 Unifit		0.00	30	30	-	-	
16	6 RockR	0.00	6	17	325	-	-		40 Syntex		0.00	40	40	-	-	-	31 Unifit		0.00	31	31	-	-	
17	6 RockR	0.00	6	17	325	-	-		41 Syntex		0.00	41	41	-	-	-	32 Unifit		0.00	32	32	-	-	
18	6 RockR	0.00	6	17	325	-	-		42 Syntex		0.00	42	42	-	-	-	33 Unifit		0.00	33	33	-	-	
19	6 RockR	0.00	6	17	325	-	-		43 Syntex		0.00	43	43	-	-	-	34 Unifit		0.00	34	34	-	-	
20	6 RockR	0.00	6	17	325	-	-		44 Syntex		0.00	44	44	-	-	-	35 Unifit		0.00	35	35	-	-	
21	6 RockR	0.00	6	17	325	-	-		45 Syntex		0.00	45	45	-	-	-	36 Unifit		0.00	36	36	-	-	
22	6 RockR	0.00	6	17	325	-	-		46 Syntex		0.00	46	46	-	-	-	37 Unifit		0.00	37	37	-	-	
23	6 RockR	0.00	6	17	325	-	-		47 Syntex		0.00	47	47	-	-	-	38 Unifit		0.00	38	38	-	-	
24	6 RockR	0.00	6	17	325	-	-		48 Syntex		0.00	48	48	-	-	-	39 Unifit		0.00	39	39	-	-	
25	6 RockR	0.00	6	17	325	-	-		49 Syntex		0.00	49	49	-	-	-	40 Unifit		0.00	40	40	-	-	
26	6 RockR	0.00	6	17	325	-	-		50 Syntex		0.00	50	50	-	-	-	41 Unifit		0.00	41	41	-	-	
27	6 RockR	0.00	6	17	325	-	-		51 Syntex		0.00	51	51	-	-	-	42 Unifit		0.00	42	42	-	-	
28	6 RockR	0.00	6	17	325	-	-		52 Syntex		0.00	52	52	-	-	-	43 Unifit		0.00	43	43	-	-	
29	6 RockR	0.00	6	17	325	-	-		53 Syntex		0.00	53	53	-	-	-	44 Unifit		0.00	44	44	-	-	
30	6 RockR	0.00	6	17	325	-	-		54 Syntex		0.00	54	54	-	-	-	45 Unifit		0.00	45	45	-	-	
31	6 RockR	0.00	6	17	325	-	-		55 Syntex		0.00	55	55	-	-	-	46 Unifit		0.00	46	46	-	-	
32	6 RockR	0.00	6	17	325	-	-		56 Syntex		0.00	56	56	-	-	-	47 Unifit		0.00	47	47	-	-	
33	6 RockR	0.00	6	17	325	-	-		57 Syntex		0.00	57	57	-	-	-	48 Unifit		0.00	48	48	-	-	
34	6 RockR	0.00	6	17	325	-	-		58 Syntex		0.00	58	58	-	-	-	49 Unifit		0.00	49	49	-	-	
35	6 RockR	0.00	6	17	325	-	-		59 Syntex		0.00	59	59	-	-	-	50 Unifit		0.00	50	50	-	-	
36	6 RockR	0.00	6	17	325	-	-		60 Syntex		0.00	60	60	-	-	-	51 Unifit		0.00	51	51	-	-	
37	6 RockR	0.00	6	17	325	-	-		61 Syntex		0.00	61	61	-	-	-	52 Unifit		0.00	52	52	-	-	
38	6 RockR	0.00	6	17	325	-	-		62 Syntex		0.00	62	62	-	-	-	53 Unifit		0.00	53	53	-	-	
39	6 RockR	0.00	6	17	325	-	-		63 Syntex		0.00	63	63	-	-	-	54 Unifit		0.00	54	54	-	-	
40	6 RockR	0.00	6	17	325	-	-		64 Syntex		0.00	64	64	-	-	-	55 Unifit		0.00	55	55	-	-	
41	6 RockR	0.00	6	17	325	-	-		65 Syntex		0.00	65	65	-</td										

AMERICA

May import figures encourage profit-taking

Wall Street

A JUMP in imports to record levels in May encouraged some profit-taking in the equity market yesterday morning but losses were limited as takeover activity triggered considerable price gains in some issues, writes Janet Bush in New York.

The Dow Jones Industrial Average edged higher from a loss of more than 10 points in mid-morning trading to be quoted 5.54 points lower at 2,444.95 at 2 pm. Volume was moderate, with 88m shares changing hands by mid-session.

The American Stock Exchange Index was quoted marginally lower at mid-session while the Nasdaq Composite Index stood 2.15 points down at 477.73.

News of a \$10.2bn US trade deficit in May compared with a

revised shortfall of \$8.3bn in April put pressure on prices immediately after the figures were released. The bond market slipped around half a point at the worst levels and the dollar dipped to lows of DM1.8885 and Y141.65. However, stocks clawed back some losses as bonds and the dollar came off their lows.

Part of this recovery could be traced to the fact that economists felt that the 4.2 per cent surge in imports in May to a quoted \$40.7bn was distorted upwards by dock strike overruns and that a large proportion of the jump could be accounted for by oil and capital goods imports.

The 0.9 per cent fall in exports appeared to confirm that the US economy is weakening. For both bond and stock markets, hopes of a further easing in US monetary policy

remain centre stage and the trade figures did little to undermine those hopes.

A focus for the equity market were results from IBM, always taken as an important benchmark for corporate profit trends. IBM posted second quarter earnings of \$2.31 per share, at the top end of the range suggested by the company of \$2.20 to \$2.30 a share.

Nevertheless, IBM's share price slipped 5% to \$115.65 by mid-session. Among other blue chips, Philip Morris was up 3% at \$144.50, F W Woolworth was down 3% at \$54.95 and Merck added 3% to \$73.75.

Marion Laboratories was heavily traded again, rising 6% to \$34.45 and so adding to its leap of 8% on Monday. The stock continued to benefit from news that Dow Chemical has agreed to purchase 39 per cent of its common shares in a \$36-

a-share tender offer and to increase its stake to 67 per cent. Dow fell 5% to \$87.75.

B F Goodrich, which had risen strongly on Monday as well, gained \$3 to \$64.45 on a press report that Centaur Partners, a New York investment company, and a European company were contemplating an \$85-a-share offer. The price gain on Monday had been on speculation of bid interest from Britain's Hanson.

McGraw-Hill, a perennial subject of takeover speculation, rose 4% to \$72.50 on the thought that it could become a target for Paramount Communications if it gives up its fight for Time.

There was also speculative buying of airline and hotel stocks. UAL jumped 5% to \$173.50 and Hilton Hotels added 3% to \$102.50. Longview Fibre gained 3.5%

to \$74.50 on news that a group including the ever-active Robert M Bass Group had built up a 7 per cent stake in the company as an investment.

Canada

SELLING pressure sent stocks lower, following a higher-than-expected May US trade deficit. But Toronto's reaction was reserved, with a new share issue and interest in takeover stocks keeping the market active.

The composite index dropped 4.1 to 3,850.7.

SOUTH AFRICA

THE BELIEF that the bullion price was set to rebound from its current lows lifted gold shares in Johannesburg in cautious trading.

EUROPE

Nervous bourses focus on American deficit

THE STATE of the US trade deficit worried European bourses yesterday and most share prices declined, writes Our Markets Staff.

PARIS closed lower in moderate volume after news of a wider-than-expected US trade deficit for May, but dealers said that the rise in the deficit was less important than the indication of actual and impending, on American inflation.

Forecasts of a fall in the US inflation rate later this year were accompanied by the warning that there may be hiccups along the way. The French, accordingly, are waiting to see what today's US consumer price index statistics will reveal.

"All we need is a neutral international environment," said one observer yesterday. "Fundamentally, the French market is on an upward trend; we have arguably the best economic environment for the past 20 years, definitely the best since 1974."

The market, he said, is looking at revised French gross domestic product estimates showing growth rates of 3% per cent or more, and unemployment dropping below 10 per cent. Interest rates are tempting some investors into bonds," he said, "but we

believe that equities will continue to compete for investors' money."

Dealers were further encouraged by the way that blue chips such as Peugeot, Paribas and St Gobain seem to be leading the market when it rallies. Yesterday's declines, meanwhile, saw the OMF 50 index down 1.99 at 500.47 and the CAC 40 9.92 lower at 1,767.40.

Agence Havas was the feature of the session but ended on its opening high with a gain of FF22 to FF198. Dealers said that Havas's FF1.55bn capital increase, most of which was reserved for existing shareholders, had been oversubscribed.

MILAN started very strongly, but profit-taking emerged mid-morning to drag share prices lower, bringing to an end the bourse's eight-session run of rises.

The Comit index slipped 0.74 to 682.65. One analyst welcomed the decline, saying: "The market was simply going too fast - there will be maybe one or two days [of lower prices] and then there will be a good opportunity to buy again." Many shares closed firmer, only to fall back in the after-market.

CIR, Mr Carlo De Benedetti's

holding company, which has just raised its stake in electronics company Olivetti, was strong again, adding L140 to L1,420 before falling back after hours to L1,290. Olivetti fell further in the wake of its one-for-10 rights issue announcement, closing L59 down at L2,481 before easing to L2,450.

Turnover was estimated to be more than L300bn, but below Monday's level.

FRANKFURT recovered a little after a weak opening in moderate trading volume, although share prices finished easier. There was some nervousness in anticipation of the US trade figures, which came after the close, but the after-market saw share prices improve slightly.

An observer said that market sentiment remained positive, because whenever there was weakness at the moment, there was no selling pressure.

The midsession FAZ index fell 6.36 to 624.11 and the closing DAX index lost 2.34 to 1,520.65. Turnover shrank to DM4.39bn from Monday's DM5.19bn, with domestic professionals responsible for much of the volume.

ZURICH was led higher by the chemical sector, which lifted shares off early lows. The Crédit Suisse index gained 3.8 to 224.1.

BRUSSELS closed mainly mixed in a dull market. The cash market index lost 0.58 to 1,520.65. Turnover shrank to BF10 to BF1364 on volume of 17,000 shares, after renewed reports that it is considering a capital increase.

OSLO share prices fell on profit-taking; lower prices for Norway's North Sea oil also contributed to losses. The all-share index fell 2.38 to 510.58.

STOCKHOLM closed marginally higher after early losses in a dull market. The Affärsvärlden General index closed up 0.2 at 1,271.2.

news of a 7.2 per cent rise in its June steel production figures.

The publisher VNU put on FI 1 to FI 198; its shares had been under strong pressure in the past week, due to sell recommendations from UK brokers.

MADRID weakened after earlier gains, following domestic trade figures showing a considerably higher deficit for the first six months of 1989. Dealers said, however, that the market had held up well in the circumstances, with the general index falling only 0.58 points to 302.20.

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Foreign investors keep a watchful eye on Portugal

A programme of privatisations is stirring interest in the emerging market, writes Alison Maitland

reminder that the stock exchange is there. In terms of marketing, it's a fantastic instrument."

He is optimistic about the long-term potential, arguing that capitalisation will double in two years and that more institutions will invest and more companies seek listings.

Pension fund managers in Portugal have only between 2 and 5 per cent of their \$300m worth of funds invested in equities. With growing competition from experienced foreign rivals, he says, "I think we'll see a big move into equities in the next 12 months."

Meanwhile, foreign investment has increased in the past few months as it became clear that a motored capital gains tax would be dropped. Settlement problems have been tackled and the only limits on foreign ownership of shares are in the privatisation issues, where the ceiling is 10 per cent.

Mr Stewart of Barings says the market offers value: "There is a great deal of difficulty in finding attractively valued situations in northern Europe."

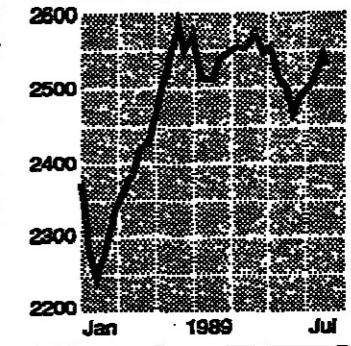
Some investors have been wary about the country's high inflation and trade deficit. But there are also bright spots on the economic side, with forecast GDP growth of 4 to 4.5 per cent this year, and lower unit labour costs than anywhere else in western Europe.

Mr Tony Ewell of Corporate Broking Services, which specialises in emerging markets in Europe and South America, is also bullish about Portugal's potential. "In the run-up to 1992, Portugal will receive 20 per cent of European Community grants for infrastructure development and reform of the financial sector, creating investment opportunities potentially far more developed than in more developed economies... the market looks extremely undervalued."

The companies which are being privatised will not in themselves increase the volume of the Lisbon stock exchange, but they will probably do something else - perhaps much more important - and that is an awareness and a confidence, shattered by the crash, gradually recovers.

Portugal

Lisbon BT & A Index



NEW ISSUE

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JULY, 1989

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**De Nationale Investeringsbank N.V.**

(The Hague, The Netherlands)

7 3/8% Bonds 1989 Due 14th July, 1996

Jointly compiled by The Financial Times Limited, Goldman, Sachs & Co., and County NatWest/Wood Mackenzie in conjunction with the Institute of Actuaries and the Faculty of Actuaries

NATIONAL AND REGIONAL MARKETS	MONDAY JULY 17 1989				FRIDAY JULY 14 1989				DOLLAR INDEX			
	US Dollar Index	Day's Change %	Pound Sterling Index	Local Currency Index	Day's change % local currency	Gross Div. Yield	US Dollar Index	Pound Sterling Index	Local Currency Index	1989 High	1989 Low	Year ago (approx)
Australia (85)	126.51	+0.4	124.53	119.55	+0.5	5.00	124.22	118.53	157.12	128.28	147.74	
Austria (119)	123.92	-0.5	113.80	122.95	+0.3	1.95	124.57	114.57	122.59	127.70	92.84	94.95
Belgium (121)	124.51	-0.5	121.46	124.51	+0.1	4.22	121.35	121.35	121.10	122.45	122.45	122.41
Canada (124)	144.87	+0.2	133.08	125.04	+0.2	3.21	144.53	138.53	137.75	144.47	142.00	142.00
Denmark (36)	209.02	-0.7	191.94	211.08	-2.3	1.49	215.11	197.84	216.05	191.89	165.35	123.51
Finland (26)	140.82	-1.2	129.13	127.01	-0.4	2.15	142.26	130.84	127.50	159.16	125.81	126.89
France (128)	124.88	+0.4	114.68	126.65	+0.5	3.00	124.44	114.46	128.06	125.85	112.57	90.54
West Germany (100)	100.97	-0.1	98.98	98.80	+0.1	2.19	93.75	88.23	92.75	95.32	79.55	75.21
Hong Kong (49)	104.52	-0.1	98.95	101.80	+0.6	5.10	104.00	95.95	104.57	140.33	86.41	108.84
Ireland (17)	143.97	+0.5	132.21	144.65	+0.8	2.80	142.28	131.87	143.27	147.15	103.20	103.20
Italy (97)	91.56	+0.8	84.08	94.44	+0.5	2.37	91.08	83.77	93.94	91.56	74.97	70.27
Japan (455)												